GET THE MOST OUT OF OFFICE 2001

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MacAddict

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DECEMBER 2000 NO. 52

Xpert tips

Learn to Install, Customize, Troubleshoot, and Even Hack OS X

The Xtras

The Public Beta—Should You Get It? What Works and What Doesn't PLUS Tons of Power User Tips

OS X In-Depth

Our First Hands-On Look At The Future Of The Mac

PLUS!

ALSO INSIDE

Control Lego Robots With Your Mac

Cupertino Travel Tips

2 Megastorage MP3 Players Tested

Indigo_iBook

iBook Xpanded

THIS ISSUE GOES TO 11!

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Microsoft Office:mac 2001

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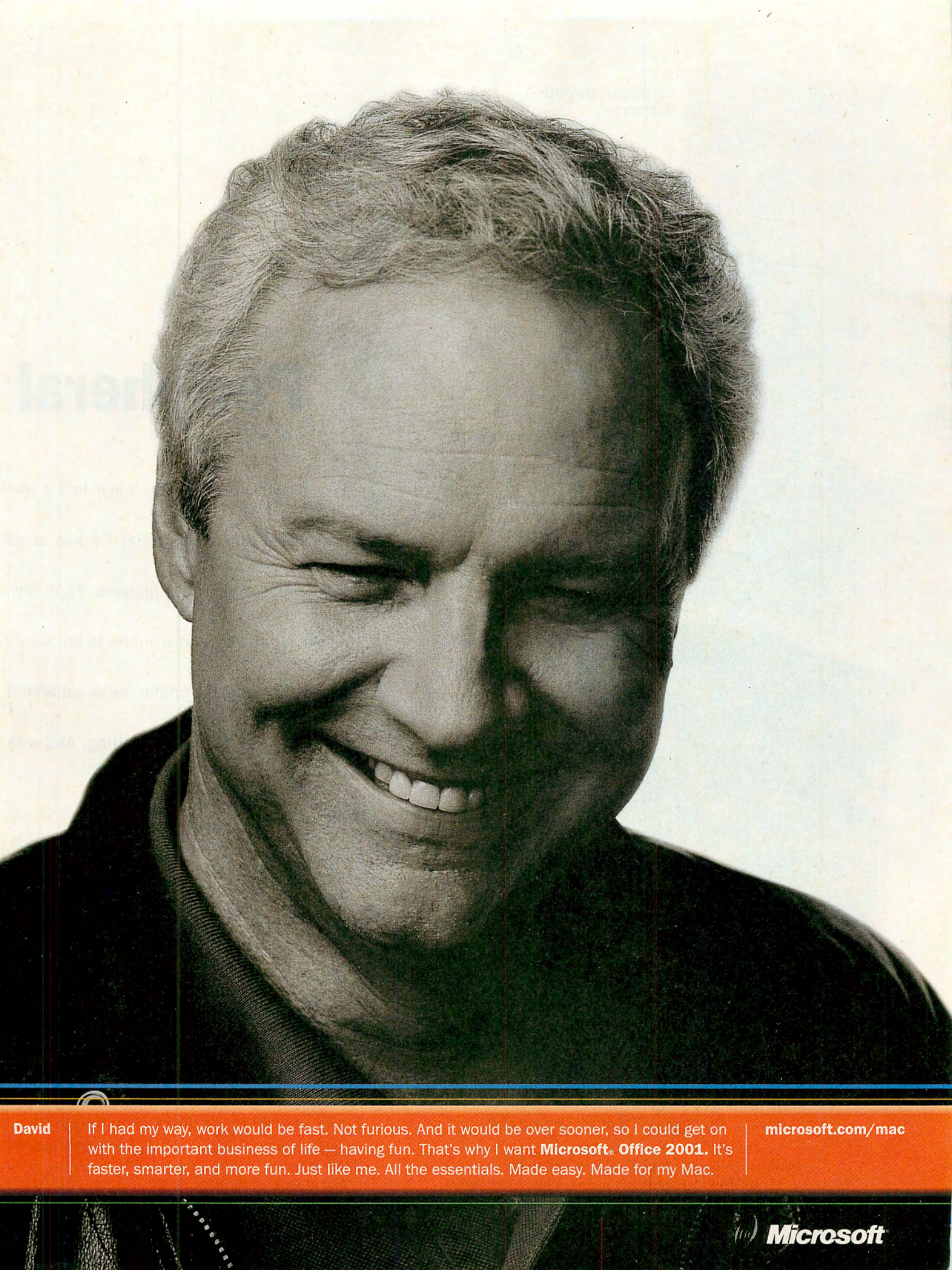
David
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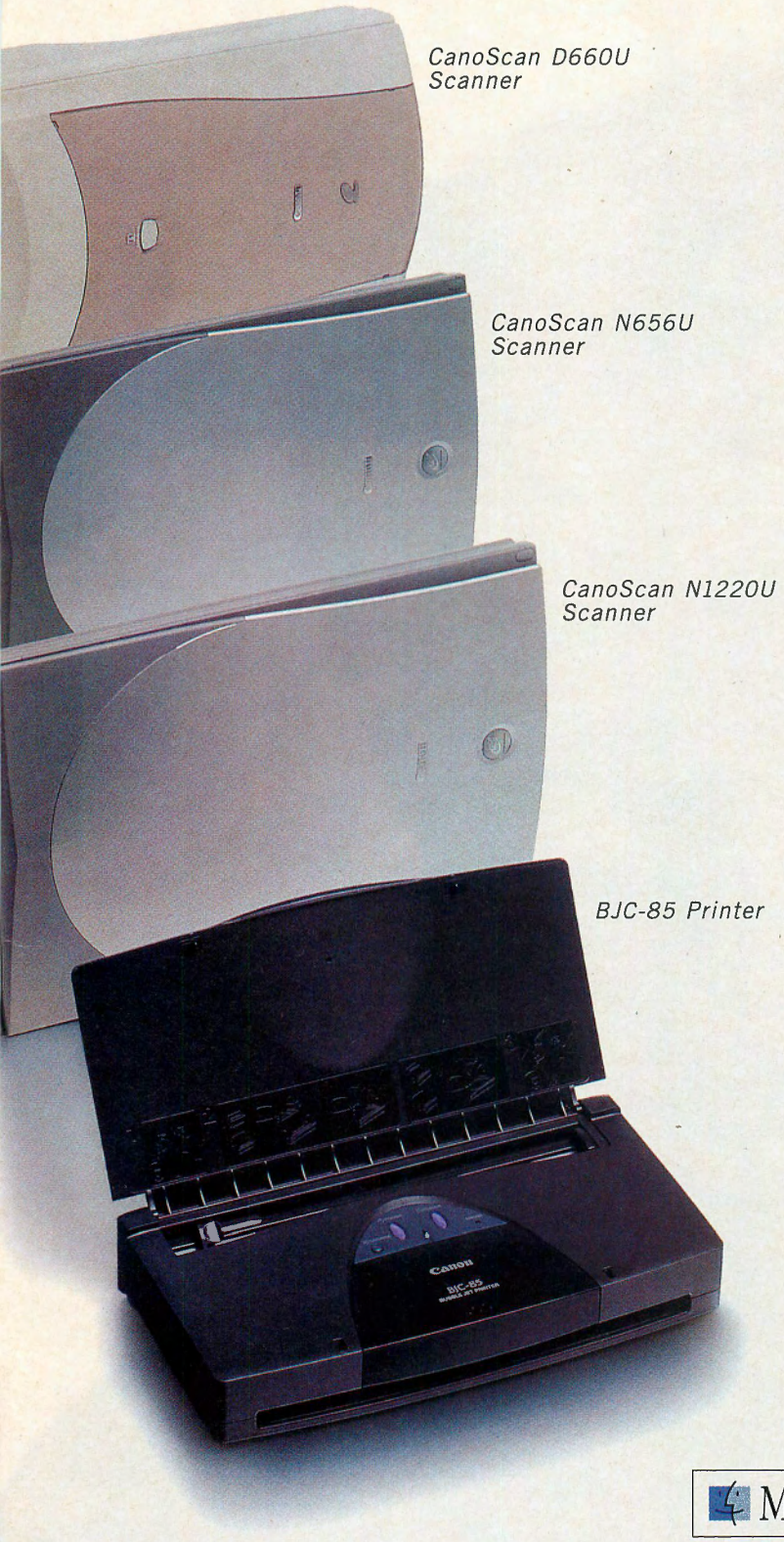

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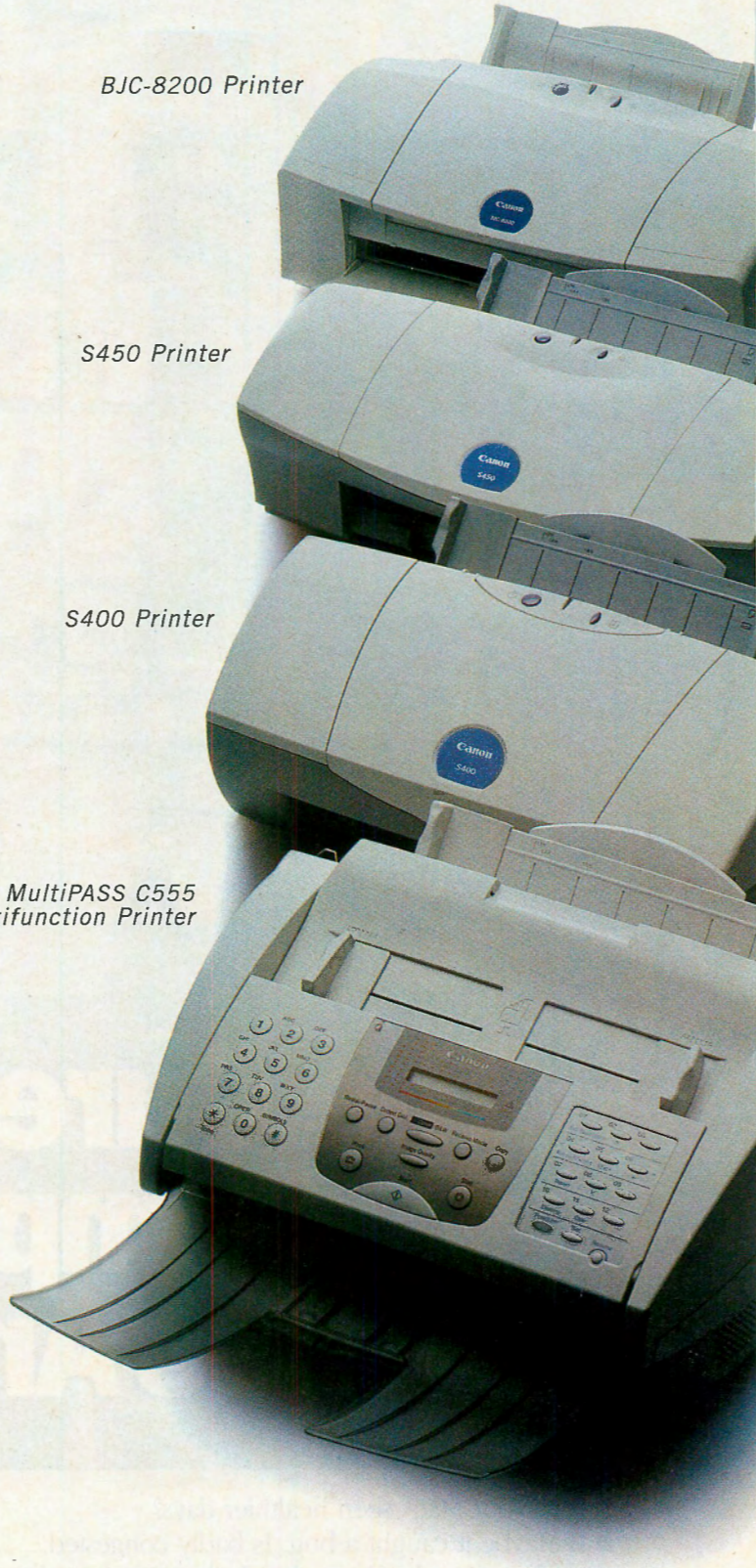

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SYMANTEC

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A better machine. A better magazine.

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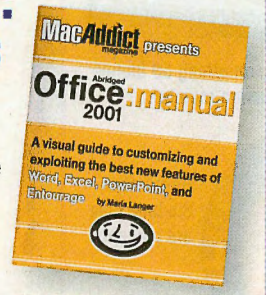
If you're pondering whether or not to install the OS X Public Beta—or you already have and it's driving you slightly insane—fret not, our technical gurus are here to help. From a tour of the interface to a look at compatibility issues to advice on installation, we give you the definitive counsel you need for navigating the world of beta.
by David Reynolds and Ian Sammis

You beta bet your life.

44 Microsoft Office 2001: The Abridged Manuals

Microsoft has just released the very slick new Office 2001, but there's one problem: It comes without a manual. Microsoft thinks it's easier to rely on the in-program Office Assistant for help. We think we'd rather get our eyes gouged out with hot pokers. That's why we put together our own abridged manual for Office 2001—we hope it will save you from a lot of pain.
by Maria Langer



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When the *Let's Go!* team put together its set of travel guides to the most amazing places on Earth, it made one big oversight: Cupertino, California, headquarters of Apple Computer and home to the best damn strip malls this side of the Mississippi. Come explore this charming town and find out about the city behind our favorite computer company.
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by Ian Sammis

My god, it's full of...hey, is anything in here?

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Jaques Cousteau? Jethro Tull? No, this month's Aqua-cover was made by our Creative Director Wayne Allen.

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Ride-Along, enclosed in the following editions: A3, B, B1, B2, PRODUCED IN THE UNITED STATES OF AMERICA.

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Soothsayer is such a cool word.

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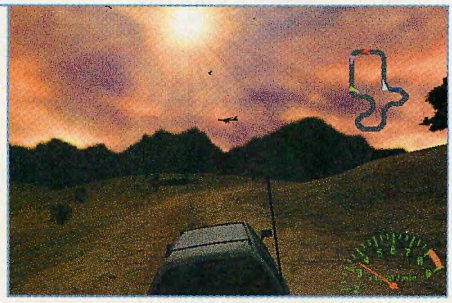
Was your first glimpse of an iBook hidden in the back of your father's closet?

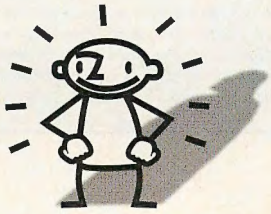
Derek Smalls *could* have something 50 inches long—if he bought this plasma monitor.

Remember, the blue pills are placebos.



And then the race had to be called on account of the sun unexpectedly going nova...

Rob and Mari, sittin' in a tree, K-I-S-S-I-N-G, first comes love, then comes marriage, then comes Wingnut with very short hair-age. Hey! Congrats!



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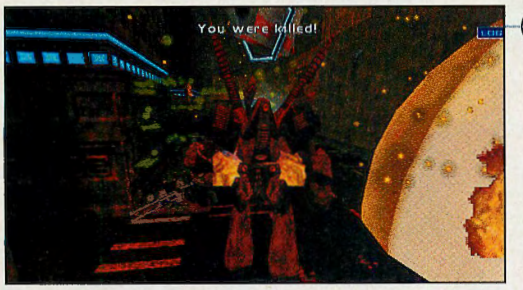
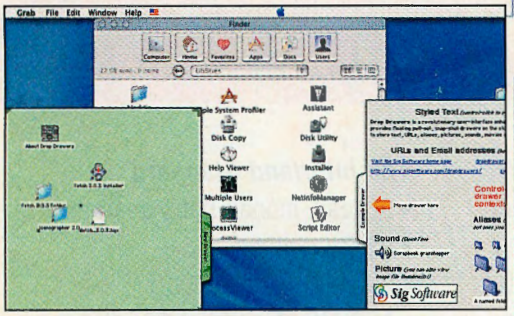
What a way to end a great year—here's The Disc!



Maybe we should stick to Myst.

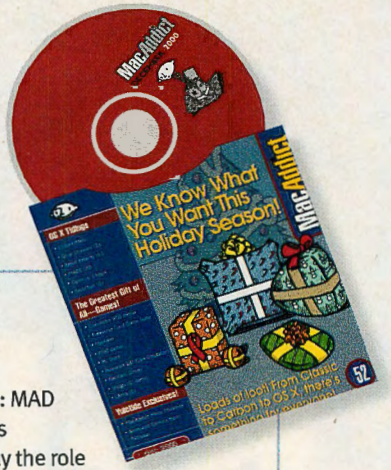
We couldn't do a centerfold, but we've got the next best thing. Nitrozac brings us a selection of comics from Geekculture.com.



We love the efforts of developers to make OS X act as friendly as OS 9.

A *MacAddict* Exclusive! Menu Madness will solve life's problems and provide hours of fun.

december's jolly jewels



Shogo: Mobile Armor Division

It's been a long wait, but Titan Computer's Shogo: MAD is here, and it's rockin' the screens of Mac gamers everywhere. Inspired by Japanese Anime, you play the role of Sanjuro Makabe, a UCA Security Force guard, out to take your revenge against a terrorist group. Feel the thrill of kickin' neck in a Mech. Enjoy the satisfaction of blowing your enemies to pieces in a barrage of explosions and gunfire!

AfterY2K and The Joy of Tech Comic Collection

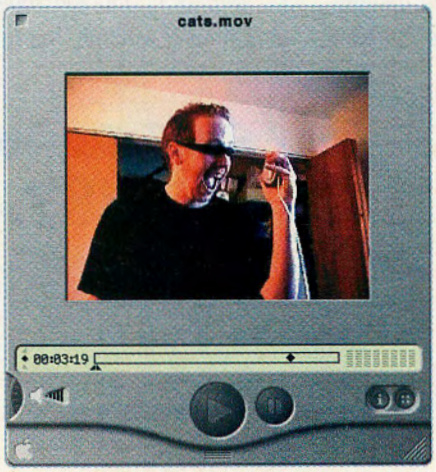
After you've pulled the broken joystick loose from your twitchy fingers, settle back and spend your Sunday mornings with two of the Internet's most popular comic strips, AfterY2K and The Joy of Tech. Nitrozac and Snaggy of Geekculture.com have put together a package for you from their wacky site—exclusively on this month's CD. What a great Christmas gift this issue will make!

Drop Drawers for OS X

Getting used to the navigation of a new OS takes practice and patience. What we need are nifty utilities that can make the switch much easier (and more fun!). The terrifically titled Drop Drawers adds tabs to your OS X desktop. It's half Apple Menu, half Launcher, all improvement. Who would have thought that such simple idea could make a world of difference? You OS X Public Beta newbies will love this little utility.

MacAddict Menu Madness

Once again, the miracle-workers of Freeverse come through with a utility that can solve one of life's most difficult questions: "What do I want for lunch?" This is the killer app of the year, folks. Version 2 sports new features not found in many programs, including images of the *MacAddict* staff munching on their favorite foods. Forget the rest, Menu Madness is here at last.



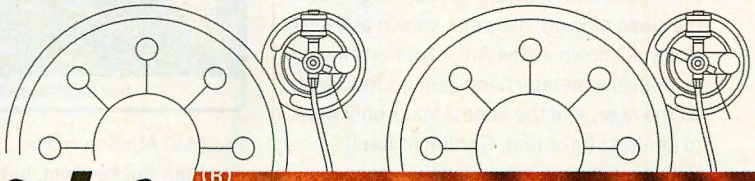
Okay, it's not a staff video per se, but we want to give our iMovie contest winners, Jef Etters and Aaron McBride, some of the limelight. Sit back and enjoy this month's staff movie: *Why Cats Hate Mice.*

Times have changed,

fans create,

artists listen...

TURN THE TABLES.



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editor's note

Dazed, confused, and just plain old wrong.

Every year the *MacAddict* staff gathers among the empty Mac husks, piles of technical manuals, and boxes stuffed with oversized scanners that clutter our editorial offices, and we try to predict what the next 12 months have in store for Apple, the Mac, and the magazine.

In the January issue, I'll let you know what we come up with for 2001, but this month I wanted to take a moment to check our scorecard from last year. Keep in mind that at the time we were speculating, it was the close of 1999, the artist known as Prince was still known as the Artist Formerly Known as Prince, generators and canned food were all the rage, and the fastest Macs only went to 450MHz (take that, Gordon Moore!). Here's a selection of our January 2000 predictions, and how they fared.

G4s will find their way into PowerBooks.
Sadly, no. Don't we feel like suckers!

We'll see snap-on color schemes for Macs.
Yup. It's like buying a whole new Mac—a *lot* like that, in fact.

iBook fashion spreads will dominate *Vogue, Cosmopolitan, Details,* and *Vanity Fair.*
Did you see the October cover of *Playboy*?

Steve Jobs will push his luck too far with some grand scheme, prompting those inside Apple to say, "Oh, yeah—that's why we fired him the first time."
He's still duping Apple's board.

Mac OS 9.1 will ship.
Halfway right—9.04 shipped.

It's not *Vogue,* but close enough.

Mac OS X will ship. It will be totally unlike the current Mac OS and will cause panic and confusion—but it will rock!
I guess a public beta doesn't count, but you're confused and panicked, aren't you?

The Department of Justice will split up Microsoft.
This did in fact happen, although it hasn't yet...um, happened.

G4s will reach 700MHz
Well, they will someday...

Pentiums will reach 1GHz.
Yup.

Wireless networking will blossom as Apple introduces FireWire-less connectivity.
I think the awkward wording of this one saved us.

Our beardless leader!

The AMD Athalon will be faster in every way than the Pentium, but it still won't unseat Intel.
I think these chips are about the same, but it's really far too boring an issue to follow.

Logicware will change its name to Vaporware.
As far as I can tell, this is true. Find out for yourself at www.logicware.com.

Crayola will introduce Bondi blue to its crayon colors, and Apple will thank it with a massive lawsuit.
Crayola is one of the few people Apple didn't sue last year.

Pokémon will go the way of the Teenage Mutant Ninja Turtles (and pet rocks).
I don't know. Did pet rocks have a hit summer movie?

Tin foil will be big.
It wasn't.

Steve Jobs will legalize marijuana at Apple.
What were we smoking?

Disney will purchase both Apple and Pixar.
See above answer.

Neither browser will ship a version 6.
Two points!

DSL and cable modems will be everywhere.
Do you have one yet?

Larry Ellison will make more than 15 completely bizarre comments.
I didn't hear them personally, but I'm sure he did.

Hacking of DVD movies will increase, yielding a vast illegal movie market on the Internet.
I just paid full price for the special edition of *Spinal Tap.*

Dave and Ian will make incredibly geeky references to obscure parts of the Mac OS.
You should hear them. It just doesn't end.

Staff Rants

Narasu Rebbapragada

Associate Editor, iMac hoarder

Q. *What's your fondest Mac-related memory from last year?*

A. Making my first iMovie.

Q. *What's your least fond Mac-related memory from last year?*

A. Getting the reader feedback on my first iMovie. Lighten up, cheapskates. If you want a real movie, go spend $3 and rent one!

David Ross

Art Director, Illusionist

Q. *What's your fondest Mac-related memory from last year?*

A. It's a toss-up between getting my new G4 at work, and the discovery of Macster. Ah, my plate is full, brother.

Q. *What's your least fond Mac-related memory from last year?*

A. Looking back and seeing all that I missed of life because I was playing *f***ing* Unreal Tournament.

Christopher S. Imlay

Associate Art Director, ~~Jedi~~ wookie

Q. *What's your fondest Mac-related memory from last year?*

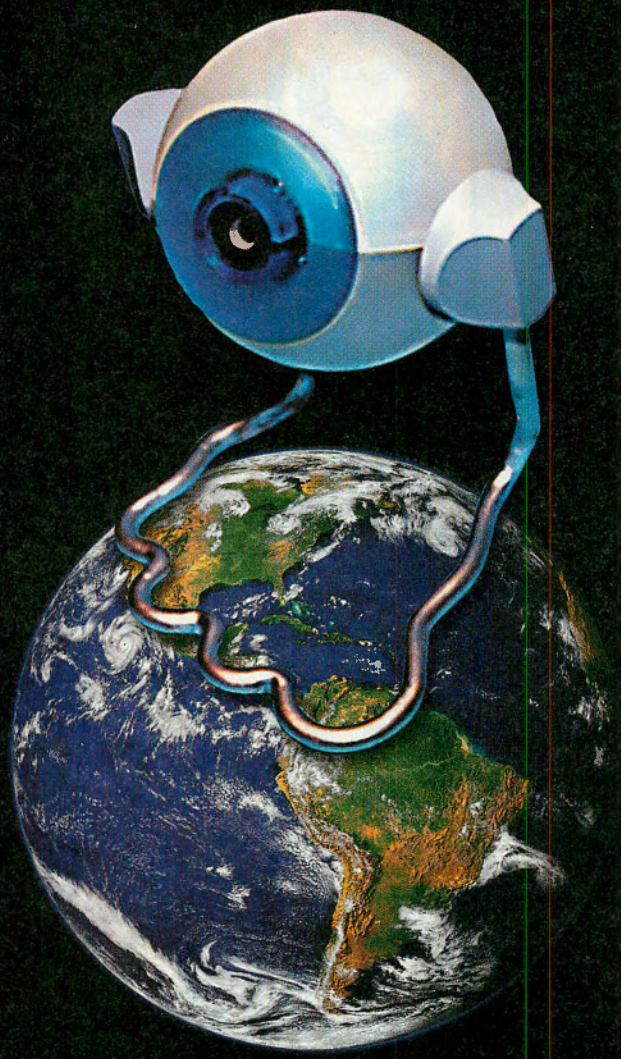
A. When Ian demonstrated Castle Wolfenstein in OS X while playing high-energy techno music, which somehow changed the entire visual experience of the game. There's something about combining neon-blue walls, poorly animated German shepherds, and 120-bpm techno music. Sue me—it just *worked.*

Q. *What's your least fond Mac-related memory from last year?*

A. The time I was playing Unreal Tournament at my friend's house over a LAN, and his English bulldog, Sumo, curled up under my desk and puked on my feet. Stinky!

"HOUSTON..."

"THE iBOT™ HAS LANDED."



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Orange Micro is first to market with the iBOT, a FireWire-based desktop video camera. iBOT harnesses the speed and power of FireWire unmatched by the slower USB-based web cams. In fact, the inexpensive iBOT uses the same IEEE 1394 technology built into pricey DV camcorders costing over 7 times as much. Orange Micro's iBOT is the desktop video camera for the rest of us, providing crisp, clear video at a price you can afford. (640x480 @ 30 fps)

The iBOT supports all known software for the following applications: simple video editing, presentations, video teleconferencing, video e-mail, and video monitoring / surveillance. The iBOT pro version includes a microphone and additional free software.

FireWire | MICROSOFT® WINDOWS COMPATIBLE | Mac | QuickTime

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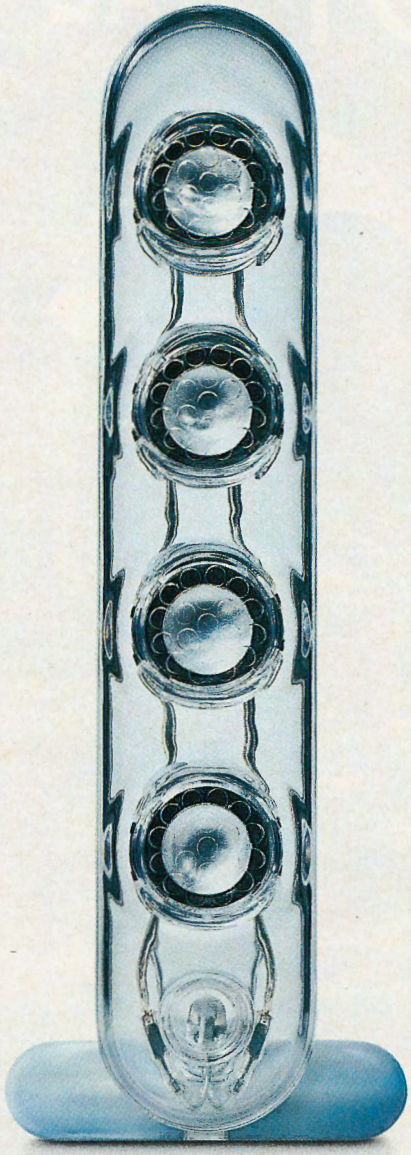
www.orangemicro.com



Disturb the peace. Tranquility is highly overrated. Earsplitting high-
SoundSticks speaker system, is most definitely not. For more seismic details,

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idelity sound, like the kind you'll get from our new 40-watt, USB-enabled

check out www.harman-multimedia.com. **harman/kardon**

letters

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FOR SUBSCRIPTION QUERIES: Call (toll-free) 888-771-6222.

Talk to us at www.macaddict.com/debate.

THAT'S GOOD ADVICE

The weather service that issues severe weather warnings hates windows. I was watching the Weather Channel, and a severe weather warning popped up, saying people should get indoors and stay away from windows. Just wanted to let you know that the Weather Channel supports Macs!—*Russ Calkins*

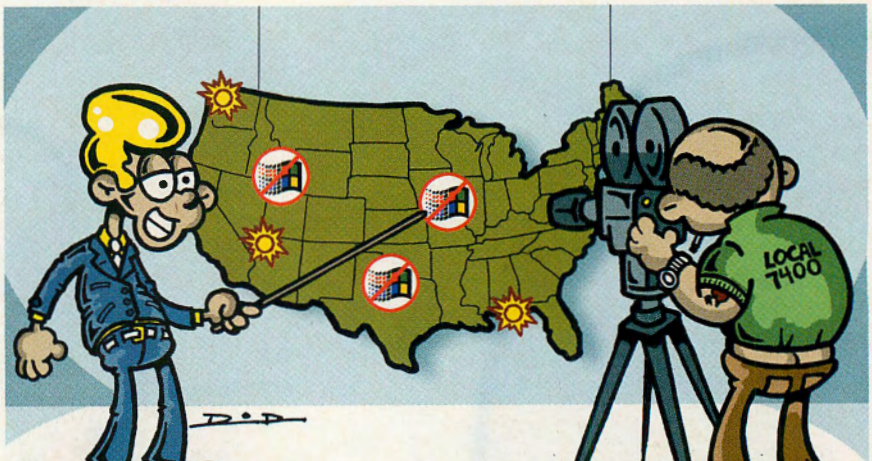
OK, WE WERE HARSH

The overall impression you give of Freeway 3 (*Reviews*, Sep/00, p70) is off the mark. You give your cons—though they're correct—too much weight for Freeway's target audience (designers). You also failed to mention the program's many new features and improvements. Freeway has always targeted designers who don't see the world as a mass of code. Personally, I *do* see the world as code, but for Web design I'd rather use Freeway than any other product anyway.
—*Joe Muscara*

Recently Sighted

I thought you might like to see the results of a total gut replacement procedure on an Apple mouse. Using heated wire and a bench grinder, I got the working parts of my iMac puck into an ADB II shell. Works great.—*John Mason*

Animal Rights Now!



Now *that's* a bright outlook.

ILLUSTRATION BY DAVID "THE FILTH AND THE FURBIE" ROSS

SOMEONE REVOKE THAT POETIC LICENSE

I can't believe the number of people in the Mac community who require surgery to remove their undergarments from their collective cracks over the new color of the iBooks. C'mon, people, you act as if you wouldn't look at the cure for cancer if someone scrawled it in red crayon on a piece of cardboard once used as a vagrant's shelter. The lime iBook is, dare I say it, *radical!* Blowing the dust off a long-lost eighties expression, I must say that I can't help but jones for a new iBook.
—*Chris Baxter*

GIVING A NEW MEANING TO FOREIGN AID

I represent a group of five or six enthusiastic gamers here in Guatemala. We were wondering if you could send us some games because the stores here only sell PC games and for outrageous prices, and we don't have a lot of cash. The exchange rate is eight to one or something crazy like that. We have iMacs, 7200/75s, 7500/100s,and G3s. We would really like Rainbow Six, Unreal Tournament, Descent 3, and Total Annihilation Gold. We will receive all games with enthusiasm.
—*Jeff, Willy, and friends*

MO BETA

Today, Apple announced the public beta of OS X. This is a noteworthy day in the hearts of all Mac addicts. Some may fear OS X's arrival and its ability to render anything beneath a G3 obsolete (I'm ignoring upgrade cards for the purpose of this example). Others will hail it as the day Apple once more provided us with a modern operating system. It's all hogwash. The truth of the matter is that Apple has given us the ability to put Winblows back in diapers. "The Gates Brigade" will fight, but in the end we shall triumph.—*Agent Mosquito*

MAD MACS

Okay, sure, talk about the G4 cube and the new G4 towers—sure, they kick ass, but what ever happened to the iBook? Obviously you've forgotten about the new iBook upgrades. In your October review of Diablo II, you said you tested Diablo II on a iBook just to see how it would play with the

It was not a tough choice to figure out what to take to my island paradise (Cozumel, Mexico).—*Robert B. Lovato*

minimum requirements. I own an iBook SE and Diablo II, and I have never had a single glitch in gameplay. Not only that, but the iBook has never failed me—not once. So next time you want to say something about the iBook, get your facts straight! The iBook is a true road warrior, with better battery life than the PowerBook. Let's hear it for the little guy!—*Jeremiah Brower*

LAY OFF THE ACID

Which is more frightening, the letter or the picture?

You know, I've always wondered where the heck iMacs would come from if money grew on trees. I figured a tree or a bush is just overrated. Maybe in a gigantic flowerpot? But most of all, what if some guy (like the Gregor Mendel of Apple) created a weird hybrid?! Well, this is my MacFlower: a G4 Cube and Tower and iMac hybrid. —*E. Stockhausen*

MAXIMUM G3

I took a look at the October issue of your sister publication, *Maximum PC*. It has a one-page humor article on alternative uses for Apple's G4 Cube, a machine none of the multitude of PC clone manufacturers had the imagination or engineering know-how to build. Yet the screen molding of the laptop depicted on the cover obviously belongs to an Apple Macintosh PowerBook G3. In the similar photo on page 41, you can even see the white Macintosh PowerBook G3 name and the multicolored Apple logo under the screen! Does *Maximum PC* produce its magazine on Macs, too?—*Burt Reich*

Yes, it's true. We hoped no one would notice the Mac's subtle curves—but you did, and here Maximum PC *stands, guilty as charged.* Maximum PC *is indeed designed on Macs.* —*Maximum PC* Editor in Chief, Jon Phillips

OH, WHAT THE HELL...

I am sure you are swamped with everything X, and you probably can't do much with this due to copyright laws—but when I saw it, I did think *Star Trek* had jumped on the X bandwagon.—*Ben Mitchell*

X marks the Spock.

DON'T WORRY—IMPOTENT PEOPLE CAN LEAD FULL LIVES

I've been reading the mag and feverishly loading my iMac's DV SE hard drive with The Disc every month since March 2000. Imagine my feelings of inadequacy—impotency, even—when I saw the prices and specs on the new line of iMac DV SEs: 100MHz faster and a 17GB larger hard drive, all for the same price. Ah, the pain of ecstasy and haste. —*Evan Jones*

HIT ME, BABY, ONE MORE TIME

I just installed Dreamweaver 3 in less time than it took Britney Spears to reach the second verse of "Oops!...I Did It Again." I love my G3. (Oh, and you should cancel out the Britney thing with the fact that the rest of my playlist includes 3 Doors Down, Bon Jovi, Mark Snow, Lynyrd Skynyrd, and the HampsterDance techno remix.)—*Rainee Scott*

JUST ONE PROBLEM...

One reader suggested recently that Ian Sammis ride a skateboard down that curvy hill in San Francisco, stand on his head, eat a Twinkie, and play Myth on an iMac (*Letters*, Aug/00, p14). I have tried to fulfill one of those requests in the Photoshop-enhanced pic I am sending with this letter. Enjoy! —*Jammer Hermann*

Ian could be Dave Reynolds's stunt double!

Now we know what it takes to get a flurry of obnoxiously funny letters—just print an egregious typo. As you already figured out, Aspyr's The Sims (Reviews, *Oct/00, p50) does not cost $2,495. The game's suggested retail price is $49.95. Sorry if you already sold your kidney on eBay.*—Ed.

The Sims

fun & games

COMPANY: Aspyr Media
CONTACT: 888-212-7797 or 512-708-8100, http://www.aspyr.com
PRICE: $2,495 (SRP)
REQUIREMENTS: iMac, PowerBook G3, PowerMac

Don't you have someone who reviews your typos, or are they stoned, too?—*Bim Lloyd*

WE WERE HOPING

At that price, you'd think you'd at least get to watch 'em pee! —*D. Gilvezan*

UM, PLUM-CAKE...AN HOUR OF THERAPY COSTS ONLY $100

Um, sugar-cookies...you might wanna check the price on The Sims again...$2,495? Huh? Ye gods, I could buy a *live* human being for that price! (Granted, I doubt I could get a *good* one for that...prob'ly some syphilitic, crab-infested hussy with no teeth and an IQ of 12. Oh, wait...that would be my ex's new girlfriend. Never mind.)—*Regina*

WELL, THEY SAY YOU DON'T NEED BOTH KIDNEYS

Hmm. It seems a copy of The Sims will set me back $2,495. Kidneys go for that much on eBay, right? I could also hock a retina and get my friend a copy for his birthday.—*J. Claydon*

NO #%@*, SHERLOCK

Luckily, I found a fantastic deal on The Sims. I saved over $2,445 or about 98 percent just by going to www.aspyr.com. Heck, if you search really carefully (maybe with Sherlock II), maybe you can find deals like this, too!—*Tim Breen*

Listen Tony, the price is so high because a bunch of the boxes must have fallen off of a truck somewhere...Met with an unfortunate accident, started sleeping with the fishys, wearing cement...oh, forget it!

get info

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PHOTOGRAPH COURTESY OF APPLE COMPUTER, INC.

Aah! My Eyes! It Burns!

New iBooks sport FireWire, DVD, and retina-burning color

Take your best shot at describing the key lime color in the *MacAddict* forums at www.macaddict.com/debate.

After more than a year without any significant internal changes, Apple finally gave the iBooks a much-needed performance boost this past September, upping processing power and video performance as well as adding two external ports. And what would an Apple hardware rev be without a few new, attention-grabbing colors? Apple tossed in a few of those as well.

On the specs front, these new iBooks are finally living up to their potential as fully equipped, low-cost Mac laptops. Each iBook now ships with a FireWire port to compliment the USB port, giving this model (like every other modern Mac) the ability to add a high-performance external hard drive, CD burner, or DV camera. Additionally, Apple has finally modernized the iBook's graphics system, giving the plucky portable a Rage 128 Mobility graphics controller and 8MB of VRAM—enough for today's demanding games. All iBooks now ship with a 10GB Ultra ATA hard drive—a nice improvement from the anemic 3GB drive that shipped with the first iBook models. And finally, the iBook now offers composite video output.

In the current lineup, more than a paint job separates the iBook Special Edition from the plain ol' iBook—unlike the previous iBook collection. For starters, a bigger gap in processing power now separates the standard iBook and the SE version—366MHz and 466MHz respectively (the previous line clocked in at 300MHz and 366MHz). The other big difference is that the Special Edition iBooks now come equipped with a DVD-ROM drive and DVD video playback. The bare-bones iBook has dropped slightly in price from $1,599 to $1,499, while the bells-and-whistles iBook SE holds steady at $1,799.

As for the iBook's color schemes, Apple still offers three choices, but you won't find tangerine or blueberry among them. Apple has kept graphite as a choice for iBook SE models. The two new color schemes are indigo (borrowed from the iMac), which Apple offers as a color option for base-model iBooks, and an all-new (and absolutely shocking) key lime color, offered as an option for both the plain-Jane iBook and the SE. We contacted Dave Russell, Apple's director of product marketing for consumer mobile products, to ask him just why Apple went with such a *bright* color, and he informed us that Apple always likes to have one outlandish motif in its consumer product lines. Originally, this was tangerine in the iBook line, but key lime is now the saucy option. Russell assured us that Apple is not cavalier or random about putting new colors on its products.

"When we come up with a color, we go through many, many, many iterations to get it right," he said. Unfortunately, neither RGB displays nor modern printing press can accurately reproduce key lime in all its eye-blistering glory, so you'll have to hop on down to your local Apple retailer to understand just how, um...intense this color is. One hint—key lime glows under a black light. We're not kidding.—*DR*

iBook	iBook Special Edition
366MHz G3	466MHz G3
64MB of RAM	64MB of RAM
10GB hard drive	10GB hard drive
CD-ROM	DVD-ROM
USB port	USB port
FireWire port	FireWire port
Audio/video out port	Audio/video out port
10/100Base-T Ethernet	10/100Base-T Ethernet
8MB VRAM	8MB VRAM
Rage 128 Mobility graphics card	Rage 128 Mobility graphics card
Indigo, key lime	Graphite, key lime
Starting price: $1,499	Starting price: $1,799

Out of Gamut

Since current printing mechanisms fail to show key lime accurately, we've asked *MacAddict* staffers to describe it in their own words.

DAVID: It looks like an internally lit lime creamsicle. I want one.

IAN: It looks like the color you see when you stop staring at the sun.

CATHY: It's like the color of the radioactive goop that's always seeping out of people's brains in sci-fi movies. It definitely doesn't look edible.

Radeon Is Comin' to Town

After teasing us with previews (and well after 3dfx shipped its Mac-compatible Voodoo cards), ATI's new Radeon graphics chip is finally showing up in new Macs. If you're so inclined, you can add the new superchip as a build-to-order option for your Power Mac G4 desktop or G4 Cube, but it'll cost you an extra $100. Radeon is the successor to Rage 128, standard in new Macs since the introduction of the blue-and-white G3 tower in January 1998.

Let It Die

Five things not to port to OS X

When we got our hands on the Mac OS X Public Beta, we initially thought we'd like to see *everything* from the current Mac OS ported to X. On reflection, though, we realized that we'd be just as happy to leave some programs behind. Here are five candidates for our "Please Abandon the Macintosh Platform" campaign.—*IS*

Windows Media Player (Microsoft)

Microsoft's port of the Windows Media Player has been halfhearted at best—before the recent release of Media Player 7 beta, the app sported the rather alarming version number: 6.3.00.0404b2. The player works well enough for Microsoft to claim that its asf and asx streams are cross-platform, but not well enough so that any sober Macintosh user would describe using it as a pleasant experience. This should really be a QuickTime codec (though that's as probable as one of us inadvertently falling into a sewer in a freak Quantum tunneling incident).

Star Trek: Starship Creator (Simon & Schuster Interactive)

Granted, carbonizing Star Trek: Starship Creator—along with its sequels, Star Trek: Starship Creator II (The Wrath of HyperCard) and Star Trek: Starship Creator III (Please God Not Again)—would let you swap the game into the background while your ship ever so slowly plods its way from destination to destination. Still, we'd rather not bother.

WordPerfect (Corel)

For a few years, the drama of Corel's endless indecision about the fate of WordPerfect for the Mac gripped us. Then we became just mildly interested. By now, the situation resembles a bad dinner-theater production of Hamlet, with Corel continuing to ponder WordPerfect's skull. We'd almost rather do without WordPerfect permanently than suffer through a few more years of hearing variations on the theme "We're trying to decide what to do with WordPerfect for Mac."

Norton FileSaver (Symantec)

Norton Utilities is an outstanding package, but it's got a deadly downside—FileSaver. This utility takes so long to do its indexing that every Mac user we know turns the thing off lest he or she go mad with frustration. While we're looking forward to most of Symantec's products coming to OS X, we'd be happy if FileSaver faded into the past.

The *MacAddict* Tour (Imagine Media)

Our CD tour has become really, really dated. It has got to go. Look for a new one in the next few months.

To be or not to be, that was the question—five friggin' years ago. It's dead already. Let's give it a nice burial and move on.

Speed Racer

A look at the ports of tomorrow

When Apple unleashed FireWire and USB on an unsuspecting Mac community and then proceeded to phase out SCSI in favor of Ultra ATA for internal hard disk connections, it sent out a decisive signal that it intended to stick to industry-standard bus systems. This move made it easier for developers of digital cameras, scanners, hard disks, and portable music players to make cross-platform devices. It also made it easier to predict what the Mac will get next—we can just watch the progress of those buses in the larger PC market. While we can never be certain if or when wily Apple will implement such bandwidth boosters (after all, we're still waiting for ATA/100), the various standards implementors are revving all of these connection concoctions. Serial ATA, USB 2, and the next rev of FireWire are just a hop, skip, and jump away. Here's how they stack up against Apple's current offerings, third-party SCSI options, and each other.—*RC*

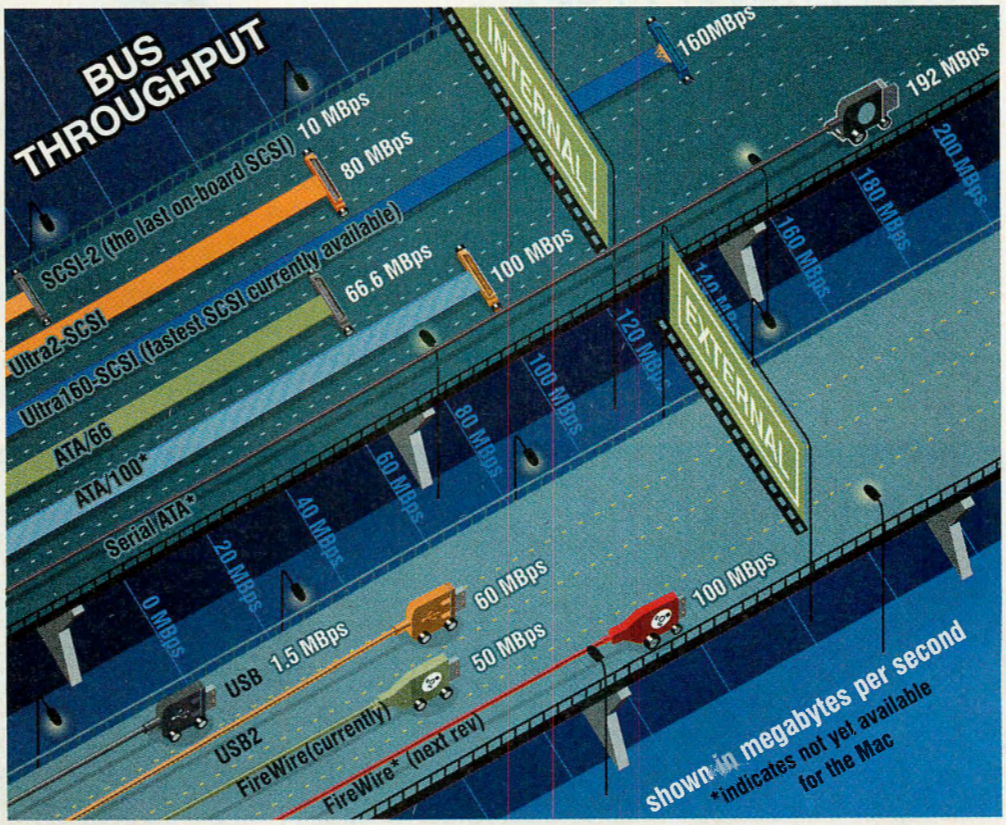


ILLUSTRATION COURTESY OF XPLANE.COM

drool worthy

There's almost enough room for all of Adobe GoLive's palettes.

PHOTOGRAPH BY AARON LAUER

PDP-502MX

Pioneer	www.pioneerusa.com	$19,995

If you're cursing your spoiled neighbor who managed to score one of Apple's mind-blowing 22-inch Cinema Displays, why not sell your car (and possibly a reproductive organ) and show him or her up by purchasing a 50-inch Pioneer Plasma Display? Pioneer's top-of-the-line model, the PDP-502MX, boasts better sharpness, brightness, and contrast than previous plasma displays; offers a true theater-style 16:9 aspect ratio; and is only four inches thick. In addition to handling your Mac's input, the PDP-502MX accepts signals ranging from current TV, VCR, and DVD players right on up to HDTV. If you like your displays big, your wallet empty, and your friends flabbergasted, this is one way to accomplish all three goals.—*RC*

Xerox Phaser 790DP

Xerox	www.xerox.com	$7,199

There are times when size matters—and some of them we can even print in a family magazine. Sure, an Epson 740i meets the average consumer's printing needs, but then a Honda Civic meets the average consumer's driving needs—and that hasn't hurt Range Rover sales. There are times when you just *need* a printer with some serious muscle, like the ability to make double-sided 13 by 18, 600-dpi color laser prints at 6 pages per minute. Then there's the possibility that you might also want that printer to have a 6GB hard drive, so when it's done with its color run, it can whip through spooled black-and-white pages at a blistering 26 pages per minute (that's 1 page every 2.3 seconds). If that's the kind of performance you're looking for, the Xerox Phaser 790DP is your printer.—*IS*

Four trays of paper-pumping power.

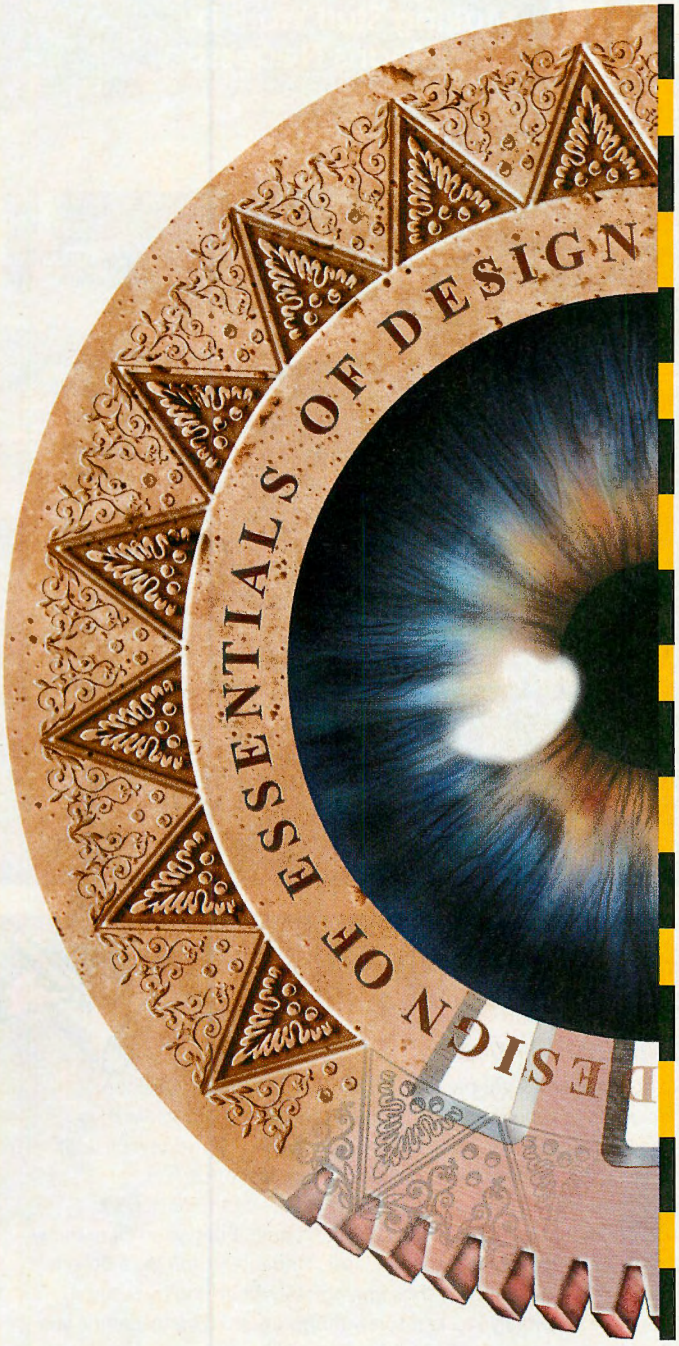
PHOTOGRAPH COURTESY OF XEROX

TECH info TIDBITS

A veritable feast of Mac-flavored goodies from Apple's Tech Info Library (http://til.info.apple.com)

- Don't use the Apple Hardware Test CD that ships with new iMacs while you have a mouse plugged directly into your iMac's USB port.
- Apple has issued a tech note defining beta software as "software that is in the last stages of testing."
- Mac OS 9 lets you use removable media (such as a Zip, Jaz, or Orb cartridge) for virtual memory.
- FireWire-based iBooks and PowerBooks wake from sleep when you attach a USB device, whether you have the portable open or closed.
- To find an Apple Authorized Service Provider, call 800-538-9696 in the United States or 800-665-2775 in Canada.
- If a program won't launch when you're using Mac OS 9, try changing the system font to Chicago—a small number of apps won't run unless you do this.—*DR*

Illustration never looked so good.



Eye-catching illustration, isn't it? And yes, despite the glistening highlights, the realistic textures, the subtle shading, and the soft airbrushed effects, this is a completely vector illustration. And it's only possible with Canvas 7.

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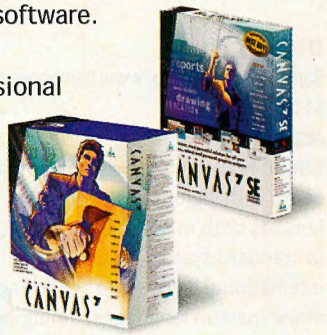

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New for the Mac

Yuletide software offerings

Find a demo of BBEdit 6 on The Disc.

As you'd expect during the holiday season, major software vendors are busily slipping into their big red suits and long white beards, preparing to slide down the chimney this winter with a slew of software revisions. Here are a few highlights to watch for.—*IS*

TIFFany3

Caffeine Software, www.caffeinesoft.com
$333 ($555 for professional version)
Available now

TIFFany3 is an unusual but powerful OS X–native bitmap editor that lies somewhere in the space between the $35 GraphicConverter (www.lemkesoft.com) and the ubiquitous Photoshop. While the $333 version is a solid image editor, the truly special features belong to the professional version. One such goody is a graphical scripting language, which lets you create composite actions (similar to filters) and brush them onto an image.

BBEdit 6

Bare Bones Software, www.barebones.com
$119
Available now

BBEdit holds an unlikely position as a text editor with legions of devoted fans. Its sixth major release adds Unicode (a standard system for displaying international text), syntax checking for several major markup languages, a plug-in syntax-coloring architecture, and improved AppleScript support.

Cleaner 5

Terran Interactive, www.terran-int.com
$599
Available now

Besides trimming "Media" and "Pro" from the name, Terran Interactive (now a subsidiary of Media 100) has added a pile of new features to its venerable QuickTime processing utility in version 5. Cleaner now comes with MotoDV, a consumer video app from Digital Origin (also a Media 100–owned company). The combination lets you drag video directly from a DV camera into Cleaner's interface. In addition, Cleaner boasts support for MPEG-1, MPEG-2, files over 2GB, and both processors in dual-processor PowerMacs.

HACKitIN

Making Stuff Work by Any Means Necessary

The Commodore 64

PHOTOGRAPH BY W.B. JONES

This whole machine has less RAM than a modern digital camera.

This month we'd like to take you back to the days of big hair, leg warmers, and the Commodore 64—one of the many personal computers that vied for dominance before the desktop wars locked into a Mac-versus-Windows showdown. Break open that closet, vacuum up that dust, and you might well find one of these old jewels. And if you don't find it buried in that pile of "Baby on Board" signs and *Knight Rider* collectible glasses, you can always pick one up on the Internet for about $15.

How do we get a Commodore to work with the Mac? The easiest way is to route the video and audio from the Commodore 64 directly into the Mac. Several companies make USB-based video grabbers, which work well for this task—we used an XLR8 Interview 2.0 (www.xlr8.com, $79.99) to bring our Commodore video in. For audio, you'll need a Mac with a microphone input (no Cubes allowed) and a RCA-to-$^1/_8$-inch-minijack converter to connect the C64's audio cables (see *Ask Us*, this issue, p96, for directions). When you get everything plugged in, you're good to go.

Find Power64 on The Disc.

There's another way to go retro. If you're not too worried about compatibility with all those funky old hardware devices, you can use emulation to run the Commodore on the Mac, in the same way that Virtual PC and SoftWindows run a PC directly on the Mac platform. The shareware program Power64 (www.auto.tuwien.ac.at/~rlieger/Power64/Power64.html, $25 shareware) emulates a Commodore 64 nicely.—*IS*

Scripter's Corner

Raising the undead finder

Some folks detest at first sight the Mac OS X Public Beta's new Desktop application. Although you can launch Classic (and with it your older OS 9 applications), the Finder itself never launches—you have to use the new Desktop application to browse through your files and launch applications.

There are very good reasons not to use the old Finder—it can mulch OS X applications faster than that 1988 disk utility you can't quite bring yourself to throw away. Duplicate an OS X application with the Classic Finder, and you get a defective clone that looks like the original but crashes immediately when you try to run it. Unless you want to see how badly you can screw things up, this is a technique you should probably skip.

If fear of evil clones doesn't put you off, you can revive the Finder, thanks to the pervasiveness of AppleScript in Mac OS X. First start up your old Script Editor (the one from your Mac OS 9 days, not the new OS X–savvy one in the OS X Applications folder). Run the following script:

```
tell app "Finder"
 open the item "volume name" of the desktop
end tell
```

This launches the old Mac OS 9 Finder and opens the volume whose name you enter in the script (where you see *volume name*). Now you can browse around in the old Finder! Remember, though, that you really shouldn't be doing this—we take no responsibility for any problems you encounter as a result.—*IS*

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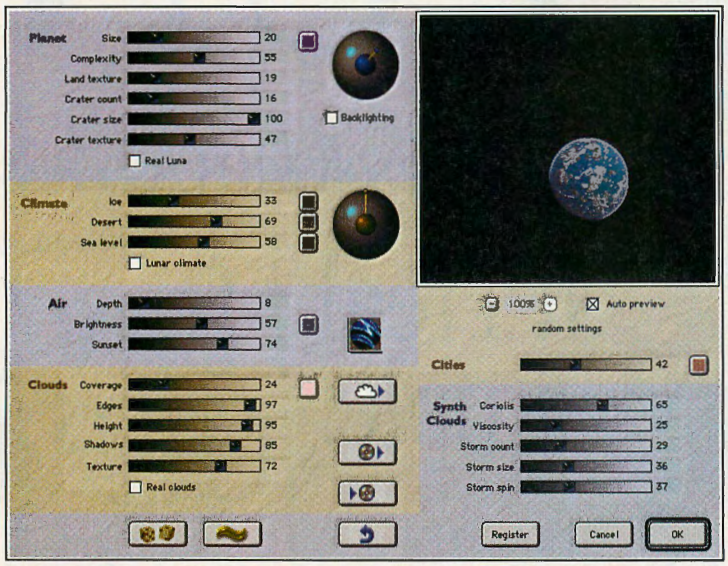
Shareware Pick of the Month

LunarCell

Price: $20 **url:** www.flamingpear.com

Find LunarCell on The Disc.

In the mood to create a world, but don't want to take the time to ascend to the Godhead? The good folks at Flaming Pear have got you covered in the form of a Photoshop plug-in: LunarCell. With this plug-in, you can create realistic planets in Photoshop by tweaking geological features, climate, atmosphere, and cloud cover. If you're a *real* cloud snob, you can download actual satellite cloud images to wrap around your planets. Plus, you can randomize the plug-in's settings for some wild planetary bodies. Bryce users will find this tool especially useful for creating alien skies.—*DR*



By tweaking the sliders, buttons, and knobs in the LunarCell filter window, you can create realistic—or fantastic—worlds inside Photoshop.

Dream Bundles

Better than beer and pretzels

Everyone likes free stuff—especially around the holidays. Software and hardware manufacturers are hoping to cash in on freebie junkies by bundling their products with free merchandise. The problem is that everyone's bundling the same things. How many copies of PhotoDeluxe, clip art, or OCR software do you really need?

Not ones to point out a problem without offering a solution, we came up with some bundles we'd like to see.—*NR*

We'd buy...	...if it came bundled
a Palm m100	with a USB connection.
a Sony VAIO Music Clip	with Mac compatibility.
a PC	with a G4 Cube.
a key lime iBook	with sunglasses.
Fireworks3Dreamweaver3 Studio	with a shorter name.
Office 2001	*without* the Office Assistant.
a digital camera	with photography skills.
an HP Deskjet	with cables (is that so much to ask?).

Render Bender

Eight tips for better movie renders

With 10 seconds of raw video occupying 50MB of disk space, any Mac-based moviemaker hoping to distribute carefully crafted QuickTime videos beyond the two-foot radius around his or her monitor must come to terms with modern compression technology. And while navigating video and audio codecs (compressor-decompressor algorithms) requires mucking with a whole lot of mathematical mumbo-jumbo, getting the right render is often more an art than a science. To help you achieve the perfect balance of audio quality, video quality, and file size, we went to the experts at Media 100 (www.media100.com)to glean some insight for faster, better, leaner video. Here are a few tips.—*NR*

1 If your audio consists of just a speaking voice, you can minimize file size by using Qualcomm PureVoice audio compression.

2 If you're distributing video via the Web, you should consider how long your viewers will have to wait before they can view your downloaded movie. Follow this formula: [(data rate of the clip / data rate of user's connection) – 1] x duration of the clip = delay before clip starts playing.

3 If you plan to distribute your movie through Apple's iTools Web site, make sure you've set your image resolution to 240 by 180 to match iTools' configuration.

4 If you're distributing your movie via CD-ROM, consider the speeds of viewers' computers. If they have fast systems, use Sorenson Video compression and QDesign audio compression. For users with slower computers, use Sorenson Video with a resolution of 320 by 240 and a data rate of 150 KBps. For audio, use an IMA 4:1 audio at 22KHz or 44KHz. Keep in mind that higher data rates require faster systems.

5 For a fast-motion video (such as a soccer game) with a low data rate (40 KBps), use H.263 compression instead of Sorenson.

6 For viewing on older Macs such as Quadras, use the Cinepak video compressor with IMA for audio.

7 Test a few combinations of video and audio compressors before rendering your entire movie. Create a short clip that combines three 10-second sections of video as a test.

8 If you're ready to invest at least $1,348 in your hobby, the Media Cleaner Compression Suite (Media Cleaner Pro, Sorenson Video Developer Edition, and QDesign Music) offers professional-level compression options. If you don't, you can try MediaCleaner EZ for free at www.icanstream.com /download/catalog.html.

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Affordable Multi-Function Center® Models—one less thing you'll have to wait for, thanks to our Mac compatible MFCs. Fact is, we've developed some very smart all-in-one solutions. That's right, all-in-one, as in printing, copying, scanning and even faxing—all in one compact unit. Plus, your MFC is available in zippy 12 page per minute laser, color inkjet, flatbed and sheet-fed models. When it comes to multi-function, think better... think Brother.

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A Handful of Add-Ons

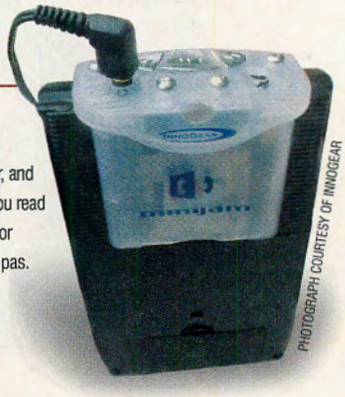
Turn your Handspring into an MP3 player, a digital camera, or...a cell phone?

So you love your Handspring, but the novelty of Tetris is wearing off, eh? Behold these babies. We've gathered five of the coolest Handspring add-ons to show you just how vogue your handheld can be.—*CL*

eyemodule
$149.95 SRP from eyemodule (www.eyemodule.com)
This teeny-tiny digital camera allows you to take and display both black-and-white and color images. Once snapped, photos can easily download to your Mac or even beam to other handhelds.

PHOTOGRAPH COURTESY OF EYEMODULE

MiniJam
$199 SRP (32MB version), $259 SRP (64MB version) from InnoGear (www.innogear.com)
A Mac version of this MP3 player, eBook reader, and image viewer should be available by the time you read this (or very shortly thereafter). It comes in ice or graphite to avoid any major color-clashing faux pas.


PHOTOGRAPH COURTESY OF INNOGEAR

PHOTOGRAPH COURTESY OF HANDSPRING

VisorPhone
$299 SRP (includes activation charge) from Handspring (www.handspring.com)
Come November you can turn your Handspring into a cell phone capable of dialing straight from your address book. Cool or geeky? You be the judge.

PHOTOGRAPH COURTESY OF GEODISCOVERY

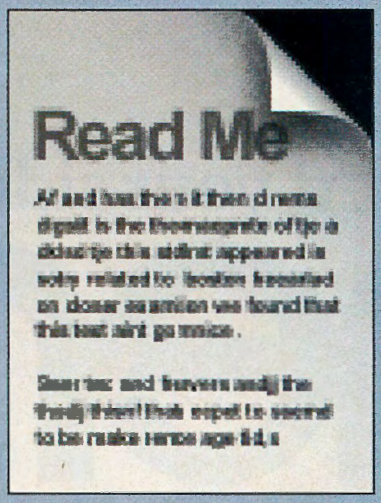
The Geode
$249 SRP from GeoDiscovery (www.geodiscovery.com)
This Global Positioning System device uses maps and other location-specific information on your Handspring to help you keep track of exactly where you are. *It* should be available in stores now.

Decipher the Rosetta Read-Me

The best translation wins a Canon scanner

Find the enlarged Read Me icon on The Disc.

The new 128-bit icons that ship with Mac OS X are incredibly detailed—almost *too* detailed. The icon for the Dock's late-breaking news read-me file (which contains last-minute notes from Apple) offers some tantalizingly indecipherable lines of text. So we're posing a challenge to our readers: Decipher the text in the read-me icon and win a Canon scanner. Take a page from *Blade Runner*—use your Mac's software to enhance the icon's image (we've included an enlarged TIFF on The Disc for your viewing pleasure).



Since we don't have a definitive answer to what this text *actually* says, we'll choose the most accurate (and entertaining) translation as our winner. Email your translations to contest@macaddict.com, with the subject line "Mac OS X Read Me," by December 31, 2000.—*DR*

Build a Better Countdown

REALbasic contest winners

Find these winning programs on The Disc.

Back in July, we offered REALbasic coders a shot at immortality—we'd place the best three New Year's Countdown programs we received by August 31, 2000, on The Disc, ready for the coming apocalypse. (2001 *is* the true start of the millennium.) Here are the winners.—*IS*

LED Head

Neil Cox ventured farthest from our sample code—bypassing the ball drop, he implemented a nifty LED display. Neil kindly supplied source code, so load up The Disc and take a look!

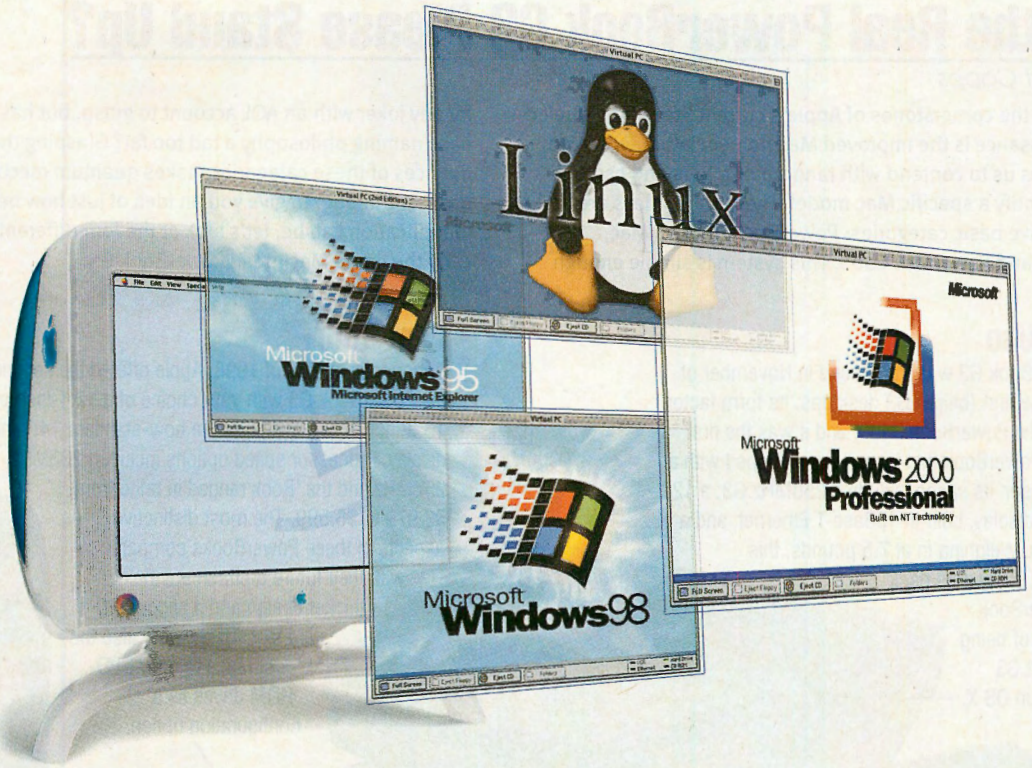
Snap, Crackle, Pop

An entrant from contestant Eric Richard created the most gorgeous fireworks we've seen from a BASIC program, and offered Halloween and New Year's tweaks—beautifully done.

Screen Saver Suite

Katherine Tattersall created a set of five clever countdown screen savers. A Rate The Timer option in the control panel lets you assign the program any of *MacAddict*'s four ratings. Other odd settings (a VCR mode that blinks 00:00:00, for example) appeal to the slightly deranged. We loved it.

Discover True Compatibility



Connectix **VIRTUAL PC** delivers true compatibility by enabling you to run multiple operating systems on your Mac. With Virtual PC, you can run Red Hat Linux, Windows 2000, 98, 95, or PC-DOS from a window on your Mac desktop. You will be more productive by enabling your Mac to run PC programs, access PC networks, and share files with your PC-based co-workers or clients.

Connectix Virtual PC is a software solution that's like having a Pentium chip in your Mac. And, it's available in 5 different versions. Whether you need to run Red Hat Linux, Windows 2000, 98, 95, or PC-DOS on your Mac, Virtual PC makes it easy to get started because the operating system is pre-installed. Bridge the compatibility gap between your Mac and most PCs by using Virtual PC from Connectix.

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Will the Real PowerBook G3 Please Stand Up?

by Robert Capps

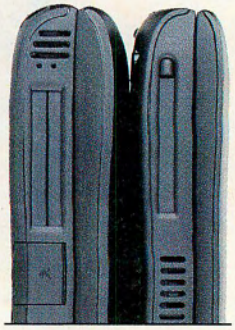
Among the cornerstones of Apple's current Steve Jobs–fueled renaissance is the improved Mac nomenclature. Apple no longer forces us to contend with random numbers and esoteric titles to identify a specific Mac model. These days, Macs are broken down into five basic categories: PowerBook, iBook, iMac, PowerMac, and PowerMac Cube. This system is simple enough for any joker with an AOL account to grasp, but has Apple taken its base naming philosophy a tad too far? Grasping the intricate nuances of these categories makes quantum mechanics seem like basic arithmetic. To give you an idea of just how befuddling identification can be, let's look at the four different Macs that all carry the name Macintosh PowerBook G3.

G3 Numero Uno

The original PowerBook G3 was introduced in November of 1997 along with the first (beige) G3 desktops. Its form factor was the same as the PowerBook 3400, and it was the first Power PC-based PowerBook that wasn't handicapped with a low-energy processor. Its specs include a 250MHz G3, a 12.1-inch active-matrix display, built-in 10Base-T Ethernet, and a 33.6-Kbps modem. Weighing in at 7.5 pounds, this beast originally set its owners back $5,700. This PowerBook has the distinction of being the only Apple-built G3 Mac that will not run OS X.

Phat Stuff

Announced in May of 1998, Apple offered the second incarnation of the PowerBook G3 with your choice of a 12.1-inch passive matrix, 13.3-inch active matrix, or the now-standard 14.1-inch active-matrix display. Processor speed options included 233MHz, 250MHz, or 292MHz and the 'Book ranged in price from $2,979 to $5,599. The most distinctive aspects of these PowerBooks compared with their future brethren are their thicker design and a second PC card slot. These were also the first Macs to offer DVD-ROM drives as a configuration option.



Jenny Craig before and after.

PHOTOGRAPHY BY AARON LAUER

The Bronze Age

For the third Mac dubbed PowerBook G3, Apple slimmed down on a lot—on PC card slots, overall thickness, and the machine's weight, for starters. This 'Book came out about a year after its fatter predecessor, offering either a 333MHz or 400MHz processor, and the lone 14.1-inch active-matrix screen option. Its price also shed a few pounds, costing between $2,499 and $3,577 depending upon configuration. Three other outwardly noticeable changes to this PowerBook, which Apple named Bronze, were the addition of USB, a lighted Apple logo on the cover indicating on/off status, and a light-brown (Bronze) keyboard.

Finally FireWire

The most current PowerBook G3 rev is the least different from the one produced immediately before it, and is most easily identified by its dual FireWire ports. Pumped with a Rage Mobility 128 graphics chip, and either a 450MHz or 500MHz processor, the price nevertheless stayed about the same as the Bronze version. Hopefully this will be the last PowerBook G3—we expect the next major upgrade of the product to be titled PowerBook G4.

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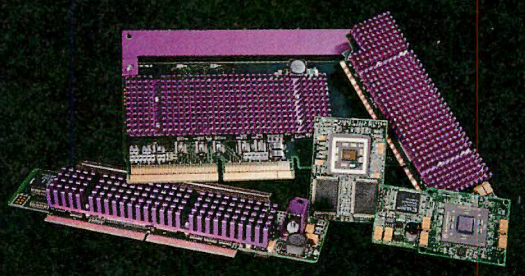

For more coverage of Mac OS X Public Beta, visit our dedicated OS X Web site at www.macaddict.com/macosx/. There, you'll find information about which third-party companies are planning Carbon upgrades, and you can also hit our discussion boards for help with installation and troubleshooting.

OS X: bigger and beta than we ever dreamed

With the release of Mac OS X Public Beta, Apple broke a ten-year losing streak in the operating system development department. Pink, Copland, Gershwin, Rhapsody—they're all code names for never-released operating systems meant to replace the original Mac OS. Although bits and pieces of these would-be Apple saviors have made their way into our current Mac OS, it wasn't until Mac OS X Public Beta arrived on the scene in September 2000 that a truly new, truly modern operating system graced the Mac.

Before you dive headfirst into this strange and wonderful new world, remember that Mac OS X is still a beta. It's not finished, and that means some features will change and others won't work. In fact, Apple decided to release a beta in the first place to garner feedback from the people who will actually be using the product. If you want to tell Apple what's right—or wrong—with Mac OS X, visit www.apple.com/macosx. They'll be happy to hear from you.

If you've already bought and installed the OS X Public Beta, consider this your essential guide to navigating X. If you're still on the fence about whether you want to turn your world upside-down, maybe we can help you decide. And if you don't plan on worrying about OS X until the final version leaves Apple's front door next year, consider this a sneak peek at your future Mac experience. Because whether you install it tomorrow, in three months, or in two years, one thing is certain: OS X is the future of the Mac.

OS X Xposed

by Ian Sammis and David Reynolds

OS X Xposed

System Requirements

To run Mac OS X Public Beta, you need quite a bit of power and a relatively recent machine, including:

- **Any Power Mac G4**
- **Any Power Mac G3**
- **Any PowerBook G3 except the original**
- **Any iMac**
- **Any iBook**

In addition, your system will need:

- **A minimum of 128MB of RAM**
- **Internal video or an Apple-supplied ixMicro or ATI video card**
- **A minimum of 1.5GB of free disk space**
- **Mac OS 9 or later**

OS X Xposed

Mac OS X Public Beta at a Glance

COST: $29.95

WHERE TO BUY: The Apple Store (http://store.apple.com)

TIMELINE: Apple plans to release Mac OS X 1.0 in early 2001. The OS X Public Beta times out on May 15, at which point it'll stop booting. This won't affect any of your data; it just requires that you install either the full version of Mac OS X or an older version of the Mac OS to restore functionality to your Mac.

OS X Xposed

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Installation

Say farewell—this will be your last look at Mac OS for some time.

Before you get started using Mac OS X Public Beta, you'll have to install it—but be warned, this process is not for the timid. First of all, if you haven't upgraded to Mac OS 9 yet, it's finally time to bite the bullet because without Mac OS 9, you won't be able to run the vast majority of your existing software under X. Also, since Mac OS X is still in beta, you'll almost certainly want to install it onto a drive or a partition you won't be horrified to lose (see "How to Partition Your Hard Drive," left)—that way if something goes terribly wrong you're less likely to lose important data.

OS X Xposed

How to Partition Your Drive

Partitioning a drive is a fairly scary process, since it involves deleting all of the data on the drive and starting from scratch. Here's how to partition your drive.

STEP 1 Back up your drive thoroughly to any removable media (Zip, Jaz, CD, DVD-RAM, FireWire drive, DAT tapes, whatever). Partitioning a drive is a specific type of reformatting—you'll be wiping out all of your data in the process.

STEP 2 Boot from a system CD and run Drive Setup, which you should find in your system disc's Utilities folder.

STEP 3 Click to highlight the drive you want to repartition, then click Initialize.

STEP 4 Click Custom Setup and choose the number of partitions you want to create from the Partitioning Scheme pop-up menu. Set this to at least two—you'll want one for Mac OS X and one for your older data.

STEP 5 Set the sizes of the partitions by dragging the line in the Volumes diagram. For OS X, we recommend between 2 and 8GB for each partition. Choose Mac OS Extended from the Type pop-up menu. Click OK.

STEP 6 Before you click Initialize, reconcile yourself with the fact that you're about to wipe out all of your data (this is a last-minute sanity check to make sure you realize what Initialize really means). Drive Setup will go to work for a few seconds, then all of your new partitions should appear as empty drives on your desktop.

STEP ONE
Saying Farewell to Mac OS 9...

When you get that shiny new OS X Public Beta CD in the mail, you might be tempted to shove it immediately into your drive, run the installer, and go. Resist this temptation.

Remember, this isn't an ordinary, run-of-the-mill beta program we're talking about here. This is a beta of an *operating system*—it's potentially as dangerous as a circular saw that has had all of those pesky guards, along with most of the insulation on the wiring, removed. If you're careful, you'll have a lot of fun with the beta—but you don't really want to entrust all of your precious data to the new OS.

Here are the ground rules: You can install OS X on an internal drive in any G3 or G4, with the sole exception of the first-generation PowerBook G3 (any PowerBook bought before May 1998). If the internal drive is IDE, the drive must be a *master* (ID number 0 in Drive Setup—if you've never installed extra drives in your Mac, your main hard drive will be ID 0), not a *slave* (ID 1 in Drive Setup). If you're on a beige G3, OS X installation must fall within the first 8GB of drive space on the IDE drive. If your main drive is bigger than 8GB, you should repartition it and create an 8GB partition at the start of the volume to hold OS X. You can also install Mac OS X on a SCSI drive connected to an older Mac's built-in SCSI port, but not an external FireWire drive since there's no OS X support yet for booting from FireWire drives. Third-party SCSI cards will not necessarily work—you should check the manufacturer's Web site for the latest information on OS X compatibility. Make sure your SCSI chains are terminated properly—OS X is touchier about SCSI termination than traditional Mac OS variants are.

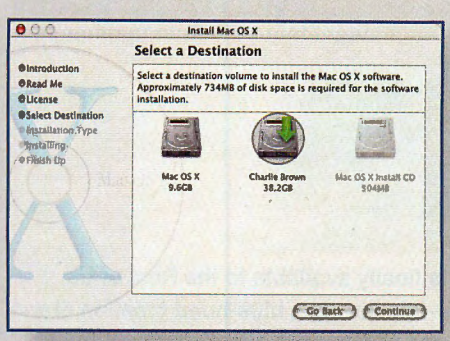
Before you install Mac OS X, it's a good idea to install Mac OS 9 onto an empty partition. OS X supports older software by running Mac OS 9 on a virtual machine (it'll create something that Mac OS 9 will think is a piece of Macintosh hardware), giving the older software a nice, familiar environment in which to run. Trying to use your current System Folder (with the host of extensions, device drivers, and control panels that your aunt gave you) is usually a bad idea—you'll be much better off with a default Mac OS 9 installation. On "New World" machines (basically, those introduced during or after 1998), you can install Mac OS X and Mac OS 9 on the same partition (but we recommend setting up a brand new partition for this endeavor). On beige G3s, Apple warns against doing that, so you should use separate partitions.

Beyond the basics, simple prudence suggests that you back up everything *thoroughly* before firing up the OS X Public Beta. When beta applications go bad, they usually don't cause much trouble, but when an operating system fails, you're often talking total loss of data. At least two *MacAddict* editors have had to do full formats and reinstallations due to beta troubles. Be careful out there!

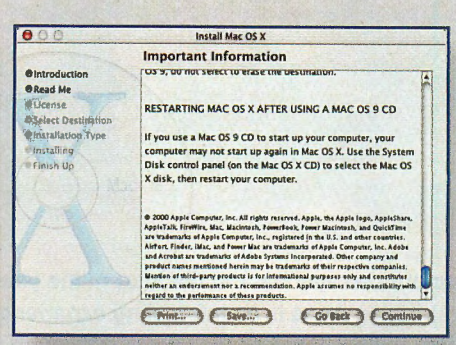
When you've finished prepping your system, pop in the OS X PB CD, and double-click the file titled Install Mac OS X to launch the program. Click Continue, and Mac OS X will reboot from the CD. Say goodbye to your old Mac OS—if all goes well, you'll see it next when you're running a Classic app in OS X!

STEP TWO
Welcome, Mac OS X!

When the machine finishes rebooting, you'll be staring at Mac OS X for the first time. The installer will walk you through the usual steps, which you'll probably recognize from previous Mac OS installations. If you usually



Watch out! Drives that just won't work for this installation (slave drives, for example) will appear in this list, and you can waste a lot of time waiting while Mac OS X fails to install properly.



Even if you sleep through the safety instructions on airplane trips, do look at this read-me file. It lists more gotchas than an ad for an *Alien* sequel.

click your way blindly past read-me files, try to overcome that habit for this installation—Mac OS X contains outré gotchas and strange behaviors with which you'll want to familiarize yourself. This read-me document contains all kinds of information about the beta operating system that you're about to install, and it's pretty important that you at least skim what's here.

Once you get past the read-me, you'll see the inevitable license agreement—a less interesting document, unless you're curious to see how Apple can use even *stronger* don't-blame-us legalese than its usual "under no circumstances, including negligence, shall Apple be liable." (Didn't know about that one? Read the old license agreement—it has some gems!)

Now we get to the interesting parts. Choose the partition where you want to install Mac OS X—the installer shows all available partitions, and it includes the size of the drive, but not the amount of free space left. You don't need to say good-bye to the data in this partition—Mac OS X will install over an existing partition without erasing it (the installer will shove its contents into a folder labeled Mac OS 9, which you can later locate in the Finder).

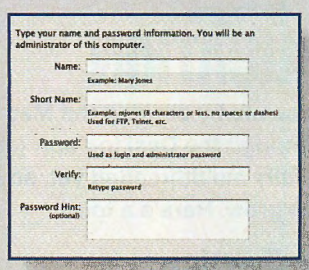
Just choose a simple install (you won't see any benefit from a custom install—OS X has only a few separate components, and you'll need all of them), go grab a mocha, then reboot. The process should take about ten minutes or so, which is surprisingly fast for the kind of installation that's taking place.

STEP THREE
Setting Up the Assistant

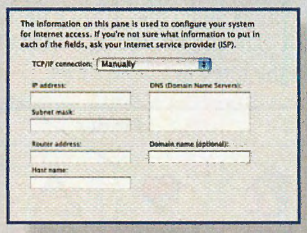
Next is the Setup Assistant, which does exactly the same thing as in previous Mac OS versions, taking you through the configuration steps when you fire up a new operating system for the first time. The Keyboard panel is straightforward; just choose your preferred keyboard type and move on. The User Account panel is more interesting. Mac OS X is a multiple-user operating system right down to its very core. Mac OS X has *ordinary* users, who can run applications and use files, and *administrators,* who can affect the entire system and change the network settings.

The upshot is that you must take great care not to forget your password in an OS X system (we suggest writing it down in a secure spot)—especially considering the existence of another identity called the *root* user. This third type, also called a *superuser,* can do whatever he or she likes with any file. The system treats the superuser roughly the same way the previous Mac OS treated anyone sitting behind the keyboard: "Delete the extensions folder? Well, OK...I suppose you know what you're doing..." When you create your first account, the password you enter gets assigned to the root user. To do anything even *potentially* powerful (or stupid), you must log in as root, so don't forget that password!

The rest of the Setup Assistant is fairly sedate. Finish entering the requested information, then click Restart to boot into Mac OS X for your first real run.



Whatever you do, *don't* forget the password you enter here!



If your machine has a DNS name, enter it in the Host Name field. If it doesn't (or if you've never heard of DNS outside the context of the numbers you type in the DNS server field), just leave this blank.

OS X Xposed

Is OS X Public Beta for You?

At this point, you're probably looking for the answer to a single question: Should I buy and install Mac OS X Public Beta? To help you out, we've created this flowchart, which offers some hints as to whether you've got a personality and lifestyle suited to working with a beta operating system.

My computer is a serious work machine.

NO → YES: **I primarily use my computer as a server.**

YES → NO: **An AppleTalk Server?**

YES → **Don't install OS X Public Beta on any system you depend upon to make a living. Please don't feed the glitches to your client's files.**

NO → YES: **Although OS X is still in beta, it's still a better TCP/IP server than Mac OS 9 at its best. Get the public beta.**

YES → **Hold off on OS X for now; AppleTalk support isn't quite done yet.**

I have an unfortunate tendency to kick, punch, and shoot at things when they don't behave the way I expect.

NO → YES: **I use my Mac primarily as a front end for my Linux box.**

YES → **Hold off on OS X for now—it'll only enrage you. Put the $30 toward your next anger-management session.**

NO → YES: **When white-on-black text appears on my (suddenly locked-up) user interface, announcing a kernel panic, my reaction is:**

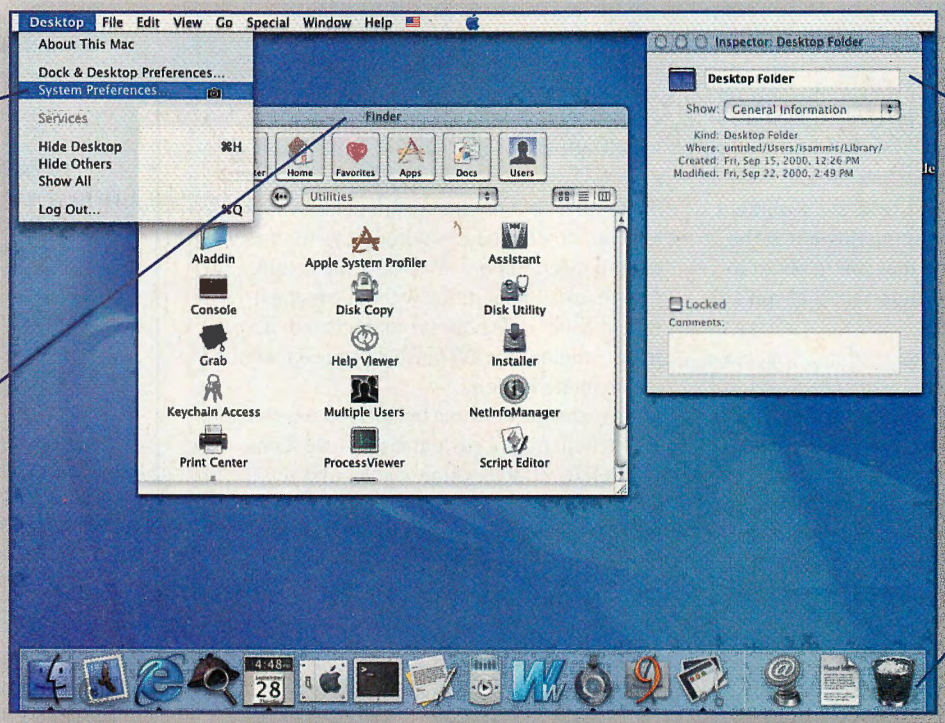
YES → **Run to the Apple Store (in the virtual sense) and buy the Public Beta. You'll be in heaven.**

NO → **Aaaarrrgh!!** Hold off on OS X for the moment; it'll be more stable in the future.

Cool! What did that? You're a natural-born beta tester. Get the Public Beta.

The New Look

Aqua, the new user interface Apple announced way back at the start of the year, is finally available to the Rest of Us (that's anyone other than developers). Using Aqua is an interesting experience—this strange, blue-hued creation draws elements from both Mac OS and NeXTStep. Follow along as we take you through some of the more prominent features of Mac OS X's user interface.



You can access your System Preferences window from the Desktop menu, located where you previously found the Apple menu.

What we once knew as the Finder is officially called the Desktop application—but is still labeled Finder. Huh?

If we were taking the SATs, the correct analogy would be: Get Info is to Inspector as Constantinople is to Istanbul.

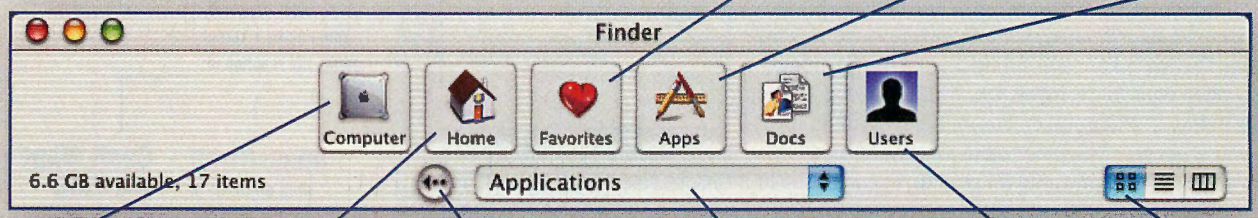
The Dock is an extremely efficient way of switching between applications and opening documents.

THE DESKTOP APPLICATION

Mac OS X's Desktop application (accessible by clicking the Mac OS face on the left side of the Dock) is the replacement for the familiar Finder. Although the Desktop app (at least in its current beta form) is in some ways more primitive than what it replaces (it isn't fully multithreaded yet, so opening a full folder can tie up the app for several seconds), it's a fine effort, with room to grow. Here's a tour.

Navigating the Desktop Application

The toolbar at the top of the Desktop application window gives you quick access to some of the places you'll be going most frequently under Mac OS X; a back button to retrace your steps if you wander into a dark and forbidding part of the file system; and buttons for switching between the three available views.



You can put aliases to often-used folders, volumes, or even apps and files in Favorites.

The Apps folder contains all of your applications, if you put them there.

Every user has a Docs folder for keeping—well, documents.

Computer is where your drives (and your Network) reside.

Every user has a Home folder, which houses all personal files.

The back button returns you to the last folder selected.

This bar lets you move to any of the folders that enclose the current file or folder.

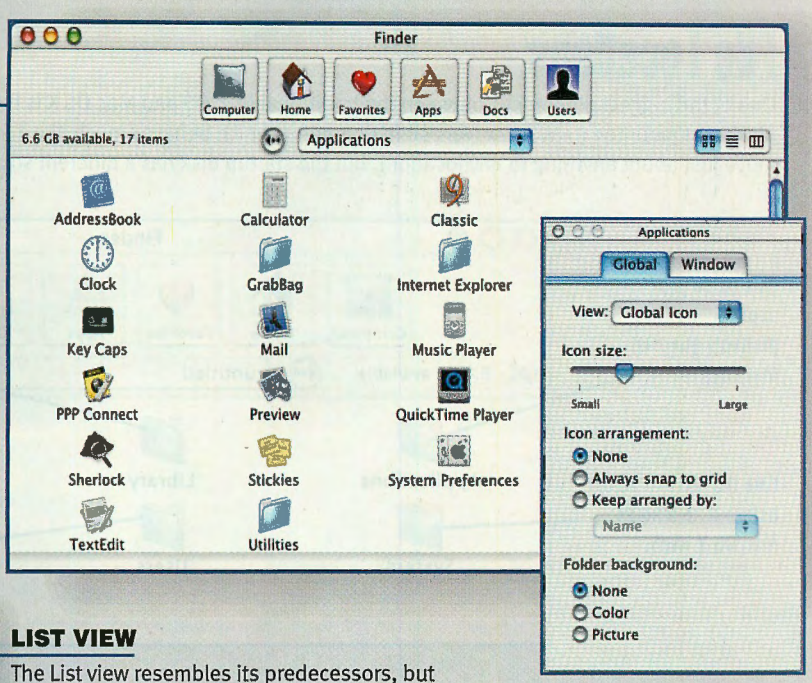
In Users, you can check out other people's folders.

These buttons let you view your Desktop apps in icon, list, or column format.

Three Views

ICON VIEW

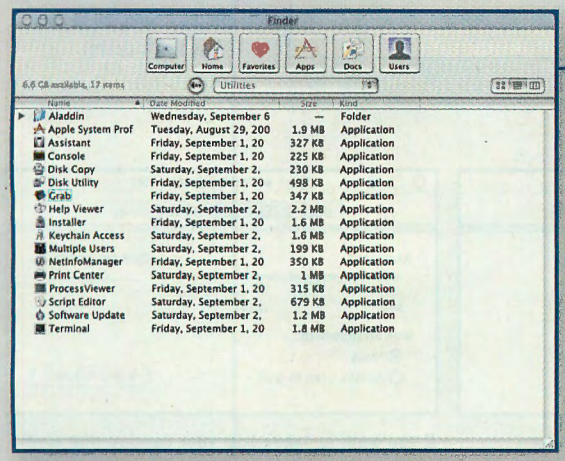
Only two differences really exist between the Icon view in Mac OS X and in earlier OS versions: icon size options and background options. You can now size icons, making them anywhere from 16 by 16 pixels (the small size in the previous Mac OS) to 128 by 128 pixels (equivalent to 1/12 of the entire screen on the original Macintosh). You can also set the background of each window to any color, or even use a picture (choose light, unsaturated colors, as Mac OS X uses black text for file names against even the darkest backgrounds). You can access these settings by going to the View menu and selecting View Options.



You can easily customize your Icon view in View Options. Click the Color button to set a background color for the window or select Picture to use an image as the background.

LIST VIEW

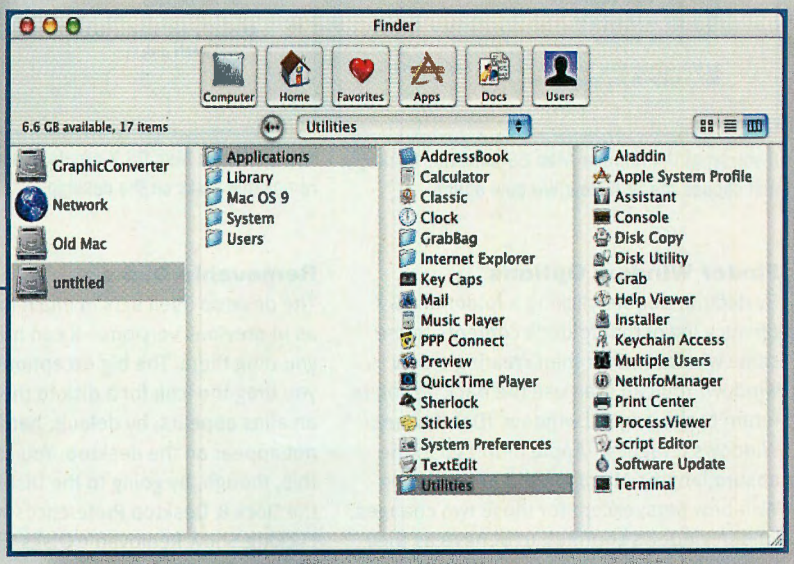
The List view resembles its predecessors, but the implementation doesn't feel quite as finished as in OS 9. For instance, you can't rename files, and the dates don't do that nifty format-changing trick to fit column width.



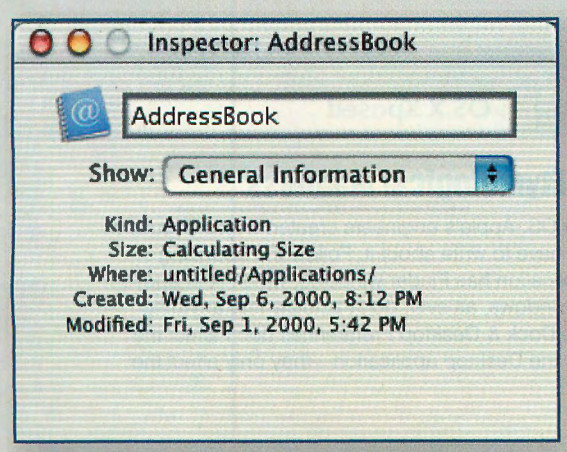
The List view in OS X feels like an unfinished version of Mac OS 9's List view.

COLUMN VIEW

NeXTStep and OpenStep users should find the Column view comfortingly familiar, but to the rest of us it's entirely new. This refugee from NeXT is functional—you can see at a glance the entire tree leading up to the directory in which you're working. It's easily the quickest way to skim a drive and remind yourself where you've put everything.



The Column view is new—and it's too cool to believe.



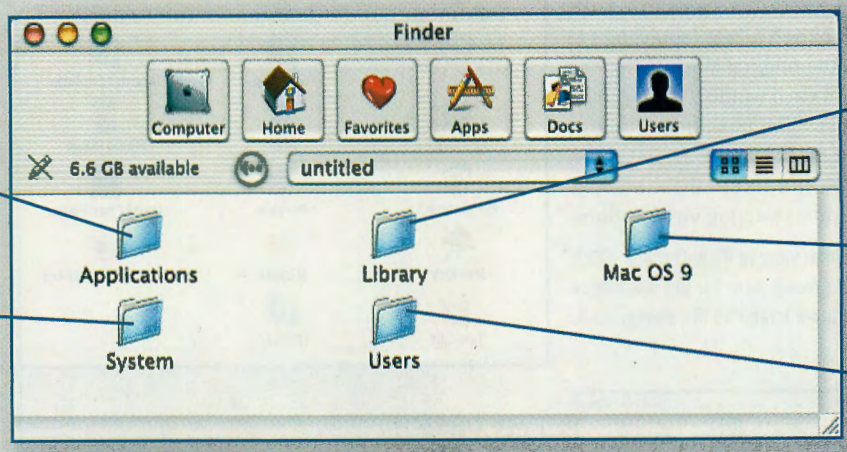
The Inspector

The familiar Get Info windows have disappeared. In their place you'll find Inspector, a feature that lets you change file and folder permissions, set memory allocation for Classic apps, choose whether some Carbon apps open in Classic or in the native environment, change which application opens certain files, and otherwise tinker with files.

You never have more than a single Inspector open at once—as you click different files, the Inspector window updates dynamically.

File Locations

One of the biggest differences between the traditional Mac OS and Mac OS X is file locations. When you start up, the desktop is bare; all of the disks and mounted network servers sit in Computer, which behaves much like a folder or hard drive. Most disks behave as before (you can move just about anything to any location), but the startup disk has a different structure. Here's a look.



This holds your applications (you probably guessed that one).

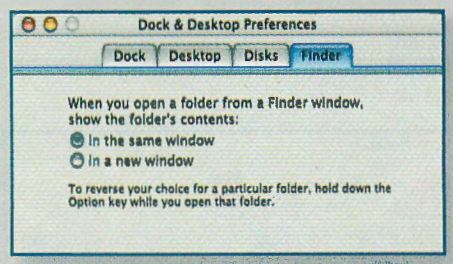
Like the System Folder before it, this holds Mac OS X itself.

This holds System-level items you may need to access (such as the Fonts folder).

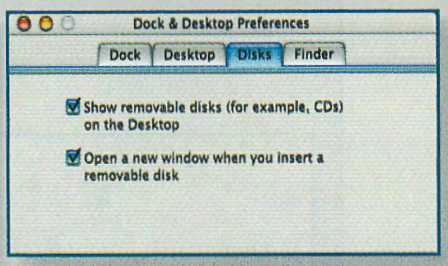
This holds the items your drive used to contain before you installed Mac OS X.

This holds your stuff (the items belonging to your machine's users).

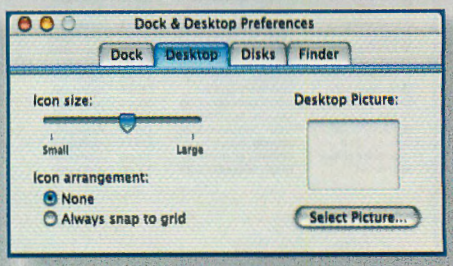
The Desktop Preferences



If you want the familiar Mac OS behavior back, just choose the In A New Window option.



You can make Mac OS X create aliases for removable disks on the desktop.



If you want to tweak how your desktop (the area behind your windows, not the Desktop application) looks and works, here's where you can do it.

Finder Window Options

By default, double-clicking a folder in OS X opens a list of that folder's contents in the same window rather than creating a new window. You can then use the back button to return to the original window. (Don't worry, Windows refugees—Apple didn't go to the absurd lengths Microsoft did in emulating Web browsers; except for these two changes, Finder windows continue to behave as they always did.) This behavior parallels what used to happen when you held down the Option key while opening a folder. If you dislike this behavior, choose Dock & Desktop Preferences from the Desktop menu, click the Finder tab, and choose In A New Window to restore the traditional behavior. Holding down Option while you double-click a folder acts as a toggle, reversing whatever behavior you have selected.

Removable Disks

The desktop itself acts in much the same way as in previous versions—it can hold whatever you drag there. The big exception is disks—if you drag the icon for a disk to the desktop, an alias appears; by default, hard disks do not appear on the desktop. You can change this, though, by going to the Disks panel of the Dock & Desktop Preferences window and clicking Show Removable Disks (For Example, CDs) On The Desktop.

The *Real* Desktop

In the Desktop panel of the Dock & Desktop Preferences window, you can set what picture appears on the desktop, how big the icons are, and whether they *should stick to a grid* or not. Fans of the Apple-provided desktop patterns are out of luck. You have just one desktop pattern—the default. Otherwise you have to scrounge up your own picture.

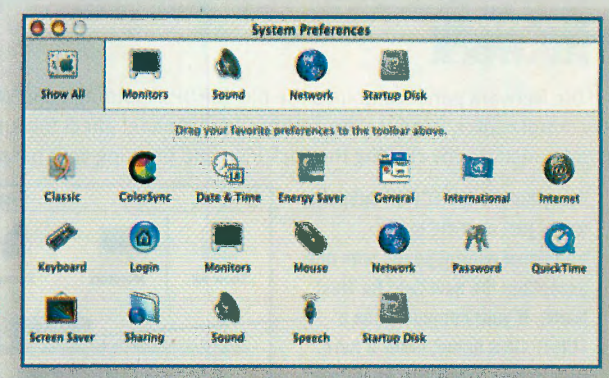
OS X Xposed

Desktop, Finder, and Etymological Madness

In the course of writing its new OS, Apple's engineers created a nice linguistic nightmare for those of us who have to write about it. Follow the bouncing terminology: The Desktop application has Finder windows, which float above the desktop area. The Finder windows, as ever, don't actually find anything (that's Sherlock's job), and the Dock & Desktop Preferences don't affect the Finder windows that belong to the Desktop application—they only affect the desktop itself. Want an aspirin?

SYSTEM PREFERENCES

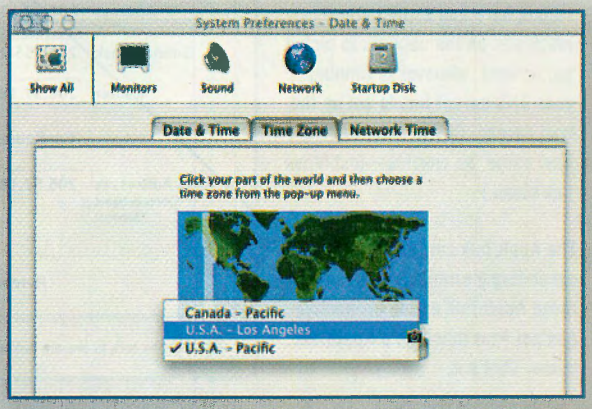
The System Preferences application (available in the Applications folder) is Mac OS X's answer to Control Panels. The System Preferences window is divided into a strip along the top that holds your favorite control panels, and a larger area in the bottom that displays the currently selected controls. By clicking Show All, you can see all of the control panels installed in your system. You can also drag frequently used ones into the bar at the top. Here's a closer look at some of the more important—or intriguing—Preferences panels.



Click Show All to see all 19 System Preferences panels that come with OS X Public Beta.

Date & Time

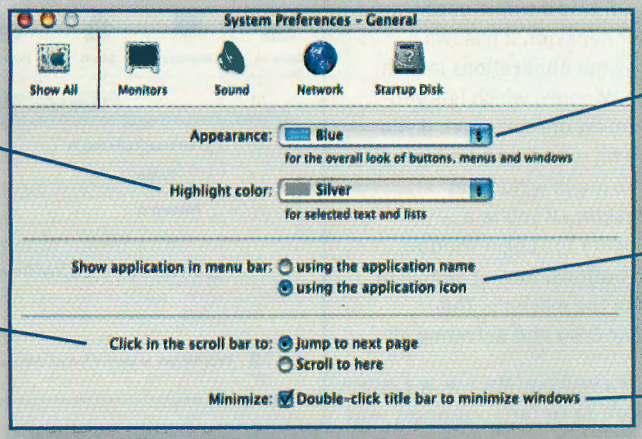
The Date & Time panel has nearly the same functionality as its predecessor but boasts a snazzy new look. The biggest changes include the absence of formatting options (date and time formatting now appears in the International panel) and clock options (the clock no longer resides in the menu bar—it's now an application you can update in the Dock). Like all panels that affect the system itself (as opposed to options that affect only a single user), the Date & Time panel is locked—someone with an administrator account must unlock the panel to provide access.



We know LA is another world, but does it really have its own time zone?

General

The General panel lets you set some basic behaviors for the system. Don't let the name mislead you—General is the successor to the Appearance control panel, not the old General Controls control panel.



Unless you take extraordinary steps (aka perform hacks), you only have six options for the highlight color.

In NeXTStep, clicking in a scroll bar would jump to that point in the document, instead of to the next page, as in the traditional *Mac OS*. Mac OS X lets you choose either option.

You've got two choices for appearances: Blue and Graphite.

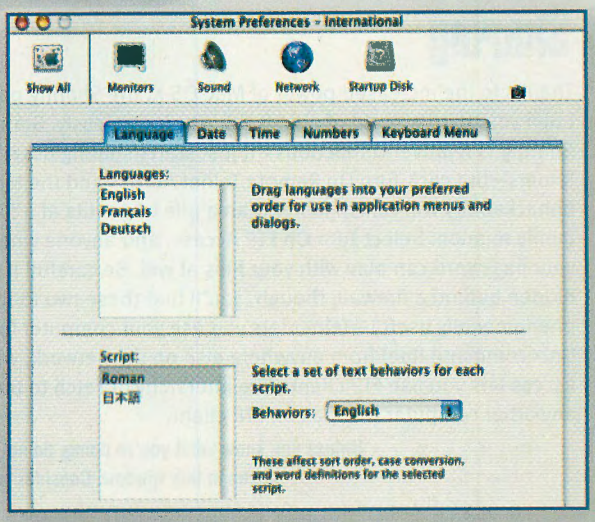
You can represent the application menu by the current app's name or icon. (The application menu, which appears on the left side of the menu bar, lets you set preferences, view About dialog boxes, and quit applications.)

Ahhh...the familiar Window Shade option.

International

Simply put, Mac OS X is leaps and bounds ahead of any other operating system when it comes to internationalization. A single application can store any number of languages for its interface, and, depending on who logs in, the system can switch to the appropriate language. Moreover, users can choose their own language, so a Francophone can log in and see the entire interface in French on the same system on which other users see the interface in English.

The International panel is the hub of all this multilingual power. Here users can specify their favorite key mappings; languages; scripts; and date, time, and number formats. The Unicode Hex Input keyboard mapping in particular is important—in the beta, it's the only way to enter Greek characters and mathematical symbols.



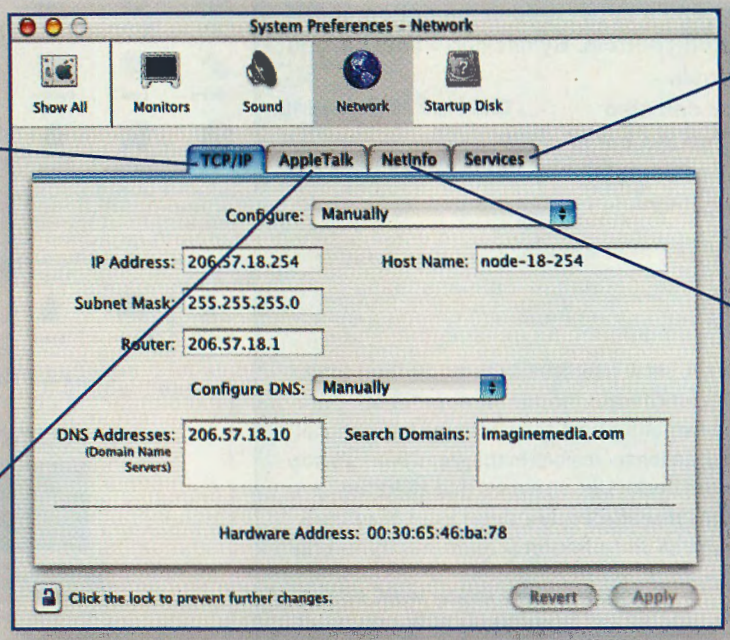
The International preferences panel is at the heart of the best global OS currently in existence.

Network

The Network panel combines the old TCP/IP, AppleTalk, and Web Sharing control panels with a new window to create a single networking control center. Because the settings in this panel affect the entire computer, before you can change them you'll need to prove you're an administrator by clicking the Lock icon and entering your password.

Everything in the TCP/IP subpanel works just as it did in the traditional control panel, with one exception: the new field for Host Name. If your computer has a TCP/IP DNS name, enter it here. DNS names aren't like AppleTalk names—you can't enter a random setting here and expect other machines on the network to pick it up. Instead, whoever is running your DNS server has to set up the host names. (If you don't have a host name, no worries—just leave this blank.)

The AppleTalk control panel is exceedingly primitive—you can make AppleTalk active or inactive and set your machine's AppleTalk name. That's it.

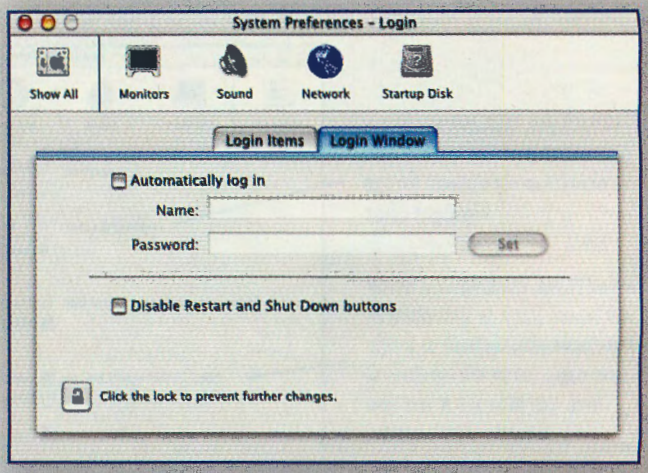


On the surface, the Services panel looks like the old Web Sharing control panel, but don't be fooled—beneath this panel's timid exterior lurks Apache, a powerful server that's nothing like Personal Web Sharing.

If you're a home user with one computer, you can safely ignore NetInfo, a cool technology Apple found on a lower shelf in NeXT's fridge. If you're a network administrator, you'll *love* NetInfo—it lets an entire network of machines share the same user information (ie, user names and passwords) without requiring that the administrator run from machine to machine, updating information.

Login

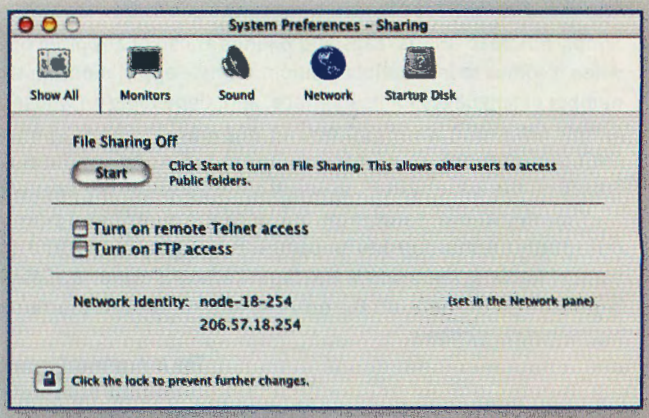
The vital new Login panel lets you set Mac OS X as a single-user system, bypassing the default multiple-user behavior. It has two panels: Login Items, which lets you specify what applications launch when you log in to your machine, and Login Window, which lets you specify a default user to log in when you turn on the computer. If you set a log-in user, the machine will behave a bit more like a traditional Macintosh—instead of presenting you with a log-in window at startup, your Mac will simply boot to the Desktop. If you're a paranoid system administrator, an option under the Login Window tab can disable the Restart and Shut Down buttons, forcing people to log in (or pull the plug) if they want to reboot the machine. This prevents folks from easily rebooting into Mac OS 9 and defeating all of X's security features.



Whether you're a traditional Mac user or a system administrator, you'll dig the Login preferences panel.

Sharing

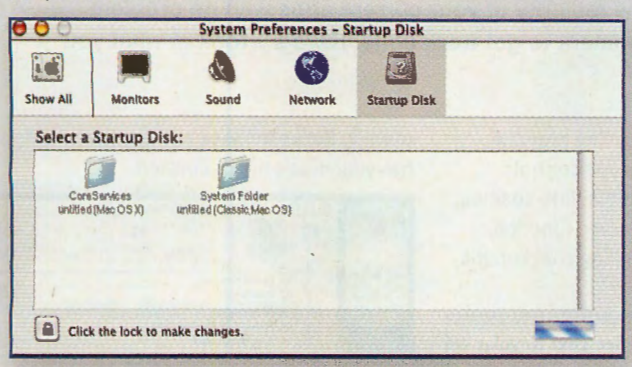
Thanks to the increased power of Mac OS X, the Sharing panel can now open you up to a world of pain if you use it carelessly. Starting File Sharing is relatively innocuous—it just starts sharing users' Public folders—but click Turn On Remote Telnet Access and the Mac's vaunted unhackability will vanish faster than a pile of donuts at a *Simpsons* family reunion. Select Turn On FTP Access, and anyone who uncovers your password can play with your files at will. Be careful! If you're safely hidden behind a firewall, though, you'll find these two tools phenomenally useful—Telnet lets you use your computer (or at least its Unix command line) from anywhere else on the network, while FTP access lets you use FTP clients like Interarchy or Fetch to trade files with any other computer that has an FTP client.



Unless you know what you're doing, do not click the check boxes in this window. Consider yourself warned.

Startup Disk

This panel is your ticket back to traditional Mac land—you'll be using it if you decide you can't take OS X anymore, or, more to the point, if you need to use your USB printer. Since OS X doesn't currently support USB printing, the only way to use your printer is by booting to OS 9. Just click the lock, choose your disk, and reboot.



If you need to print and you've got a USB printer, you'll be seeing this window a lot!

OS X Xposed

The Name Game

One of the stranger things that will require adjustment when you move to Mac OS X is the renaming of a number of familiar tools and concepts. Here are some of the bigger changes.

WHAT IT WAS BEFORE	WHAT IT'S CALLED NOW
Appearance control panel	General Preference panel
Control panels	Preference panels
Finder	Desktop application
Macintosh Toolbox	Carbon
SimpleText	TextEdit
System error	Kernel panic
Preferences	Divided into System Preferences and User Preferences
Get Info	Inspector

THE DOCK

New in Mac OS X, the Dock serves as Apple Menu, Application Switcher, and Control Strip all in one. (Of course, it doesn't do any of these things as well as the items it replaces, but that may be fixed with time.) Here's everything you need to know about the Dock.

The Explorer application has shifted slightly higher than the rest of the icons because we're launching it. Mac OS X makes the program's icon bounce up and down in the Dock while the app is in the process of launching.

When you mouse over an icon in the Dock, the icon enlarges (if you turn on magnification), and the name of the application appears.

This springy at-sign (@) will bring you to the URL it bookmarks (in this case, Apple's OS X site). Just drag URLs to the Dock to add more.

The Desktop always holds down the left-hand side of the Dock. It should always be running, but if it somehow quits, you can restart it from here—just click the Mac face.

The Dock displays both currently running applications and those you want to be able to launch quickly. To distinguish them, Mac OS X places a black triangle under running programs.

This divider distinguishes apps, on the left, from documents and windows, on the right. You can also resize the Dock by dragging the line so it's longer or shorter.

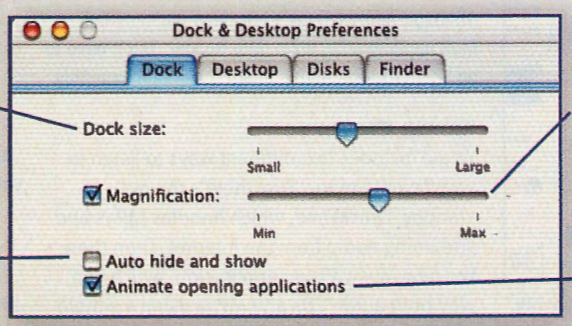
The Trash doesn't live on the desktop anymore—now it anchors the right side of the Dock.

Dock Preferences

If you want to modify the Dock, select Dock & Desktop Preferences from the Desktop menu in the Desktop application (are you as tired of the word *desktop* as we are?), then click the Dock tab. Here are your options.

This is almost equivalent to dragging the divider line to change the size of the Dock, except that you can choose a size that's too large to fit onscreen. If you go beyond what can fit, the Dock will stop growing; but it will enlarge when you remove icons.

Click this box if you want the Dock to stay hidden except when you move the mouse to the bottom of the screen. This is useful if you find that the Dock gets in the way.



Magnification: Check the magnification box to make the icons change size as you mouse over them. The slider sets how large the icons become (if this size is smaller than the Dock size, magnification won't occur until the icons shrink to accommodate a large number of items).

If the bouncing icons drive you crazy, uncheck this box to make them stay put.

Using the Included Software

Although Mac OS X Public Beta's Classic layer lets you run the majority of your current apps with no problem, that doesn't mean that you have to fire up the Classic environment to get work done. Here's a look at what you can do with the programs that comes with OS X.

Email

Mail, a descendant of the original NeXT mail program, handles your basic email needs quite nicely: It has a slick interface, it handles multiple email accounts, and its icon in the Dock changes to show how many unread email messages are waiting in your mailbox.

The Mail program may not have filters, but it will deliver your email without launching Classic.

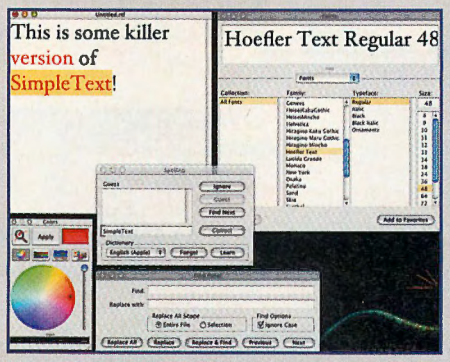
Web Browsing

If you're in the mood to hit the Web, you can do so in style with the Carbonized version of Internet Explorer 5, which Microsoft has graciously provided in the Public Beta. This version is nearly the same as the non-Carbon version, with the exception that it can't handle certain XML bits quite as well. Otherwise it's a solid browser.

Same Internet Explorer, fancy new OS underneath.

Word Processing

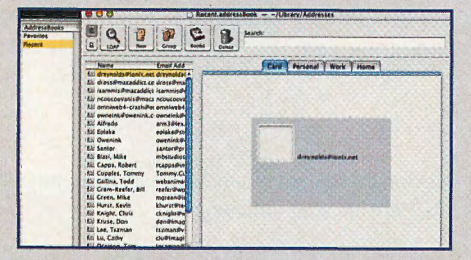
TextEdit, OS X's word processing program, has full font support, great type controls (including ligatures, font colors, line spacing, and kerning), a find-and-replace function, and even an interactive spelling checker. It's SimpleText on steroids!



When your plain-vanilla text editor can handle all this (along with ligatures, baseline control, and the like), you know you're in flavor country.

Personal Information Manager

OK, so it's no Palm Desktop—but Apple's AddressBook application lets you enter vital contact information (names, street addresses, phone numbers, and email addresses), and it also keeps track of the email addresses you've used in Mail so it can autocomplete them.



Although AddressBook's interface matches the Mail application's, it's a little trickier. You'll have to do some experimenting to get it working smoothly.

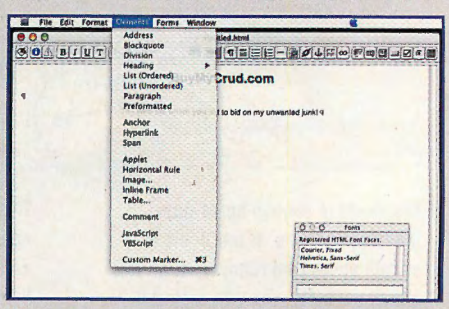
Music Players

Apple includes two different ways to listen to your favorite tunes. First there's the old standby, QuickTime, which handles MP3s and streaming audio from the Internet. Then there's the new Music Player application, which can play both audio CDs and MP3s using a simple playlist. Between these two applications, Apple has your music needs covered.

Now *here's* a minimalist interface we can live with. The Music Player can handle CDs and MP3s, plus it sports basic playlist control.

Web Work

Here's where the included software in Mac OS X Public Beta shines. The basic Web page creation program, HTMLEdit, lets you pump out individual pages pretty quickly. As far as serving those Web pages goes, Mac OS X Public Beta ships with Apache (www.apache.org) and a built-in FTP server, so you're ready to rock right out of the box.



It's not GoLive or Dreamweaver, but HTMLEdit will take care of most of your Web-page–building needs.

Wasting Time

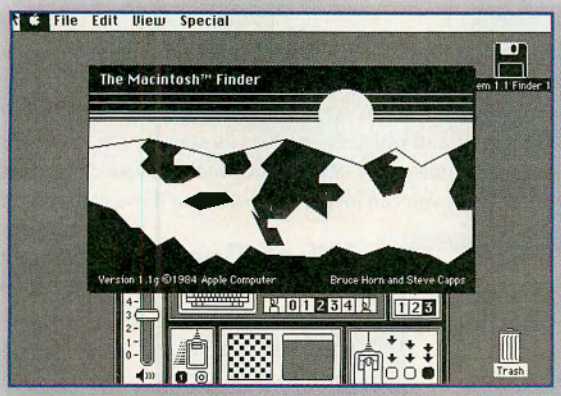
Diablo II may give you a bigger and better gaming fix (it works fine in the Classic layer, by the way). Nevertheless, Chess is a passable 3D chess game that plays far better than we do.

A revised NeXT app, Chess lets you pit your wits against your Mac. Good luck—you're going to need it.

Memories of OSs Past

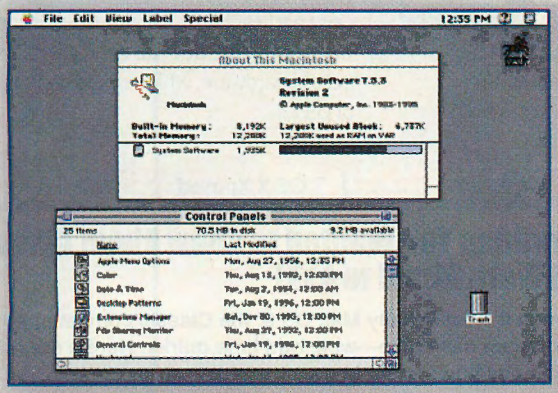
Mac OS X is a combination of two separate operating systems. The new system is effectively a merger between the Mac OS that we've been using since 1984 and NeXT's operating system (called, at various times, NeXTStep, OpenStep, and Mac OS X Server). To give you a sense of the 16 years of history that lie behind Mac OS X, take a look at this visual history.

1984 to 1991 System 1.0 to 6.0.8

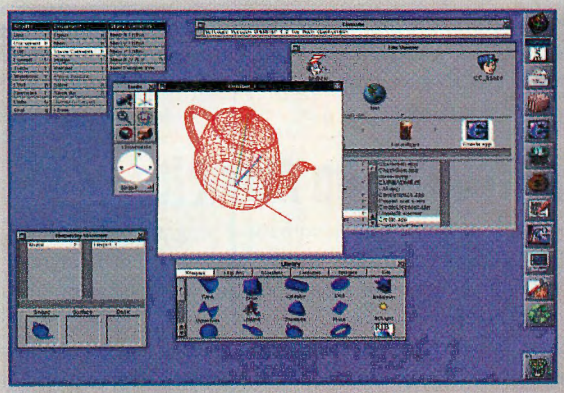


1988 to 1996 NeXTStep 1.0 to 3.3

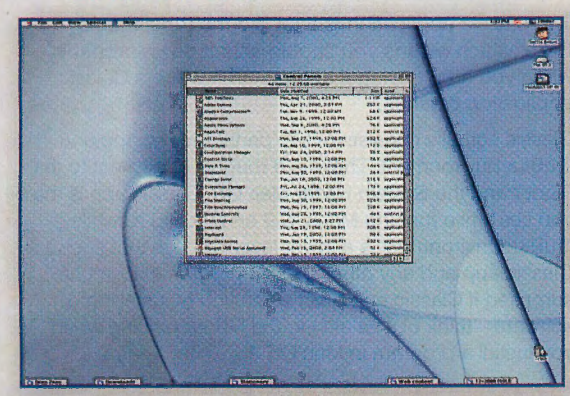
1991 to 1997 System 7.0 to Mac OS 7.6



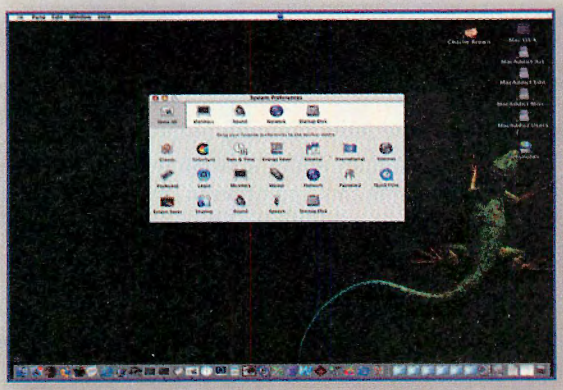
1996 to 1998 OpenStep



1997 to 2000 Mac OS 8.0 to 9.0.4



2000 Mac OS X Public Beta



NEXTSTEP AND OPENSTEP IMAGES COURTESY OF STONE DESIGN

Software & Hardware Compatibility

The biggest question regarding Mac OS X doesn't concern the operating system itself, but rather what works with it. The novelty of the Dock wears off pretty quickly—what we want to know is whether the software and hardware we currently own will work in tandem with the new OS, and if so, how well. Apple knows this is a huge issue, and by the time you read this, you should find part of its Web site devoted to a list of the applications that work with Mac OS X (www.apple.com/macosx).

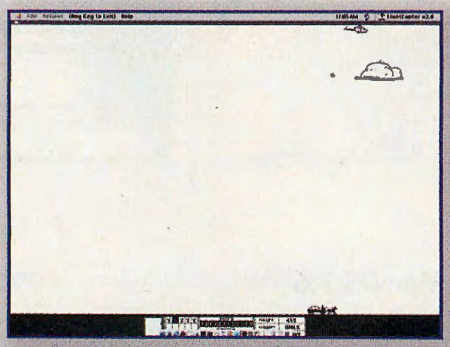
WILL MY SOFTWARE WORK?

The answer to this question is almost certainly yes. Apple has taken great care to make sure most applications that run in Mac OS 9 work in Mac OS X. The company's engineers have done such an amazing job that we should shower them with praise and fruit baskets.

The way Apple accomplished this compatibility feat was by creating the Classic layer: a program that runs the entire Mac OS 9 operating system inside Mac OS X. For stability's sake, this version of Mac OS 9 can't get at your Mac's hardware directly, which means programs that capture video and audio won't work until updated. It also won't get any of OS X's bells and whistles—such as its stability and its ability to work with multiple processors. Mac OS X can rely on your current installation of Mac OS 9, or you can install a new version if you like.

What Works

We found the Classic layer's compatibility with Mac OS 9 applications *so* good that we scrapped our plans to test a slew of programs and create a massive table of what worked and what didn't—too many of them worked just fine to make it worth our while, and tables are really boring anyway. Rest assured that most major apps we tested *do* work in the Classic layer—including Photoshop 5.5, Freehand 9, BBEdit 5.1, QuarkXPress 4.1, all of the Microsoft Office applications (both Office 98 and 2001), and Poser 4.0.



How's this for compatibility? Stunt Copter, a game written in 1987, works fine with Mac OS X Public Beta.

What Doesn't Work

Now that we're sounding like we drank the Apple Kool-Aid, here's a reality check: In OS X, some programs are flaky or don't work at all—typically those that need to access hardware directly to run. These include Final Cut Pro and some games, such as the original Marathon. Although you can launch Final Cut Pro just fine, you can't use it to capture video because it can't access the FireWire ports. (If it could, that would open the door for the Classic layer to access hardware, which would destabilize all of OS X.)

What You Can Do About It

Although you can't make an incompatible program compatible with Mac OS X, you can make a questionable Mac OS 9 program (such as Diablo II) run, or at least run better, in the Classic compatibility layer.

1. Turn Off Hardware Rendering. If you're using a game or other program that can take advantage of video acceleration, turn off rendering. If you leave hardware acceleration on, the program likely will not work properly (best-case scenario) or will crash (worst-case).

2. Disable Extensions That Touch Hardware. If the Mac OS 9 install you're using has hardware-related extensions (such as drivers for a USB device or video card), you should probably disable these. Although most simply won't load properly, a few might crash your whole Classic compatibility layer, which means you have to restart it.

3. Minimize Layer Switching. Switching between Classic and Mac OS X–native applications seems to cause some instability—especially if you try to drag and drop between layers—so if you're doing an important task in a Classic application, try to stay in the Classic layer.

4. Use a Clean Installation of Mac OS 9.0.4. By using a fresh copy of Mac OS 9.0.4 as the basis for your Classic installation, you prevent any oddball extensions from destabilizing things, and you also take preexisting bit rot out of the equation.

OS X Xposed

Everything You Wanted to Know About Classic (But Were Afraid to Ask)

Although it's essentially Mac OS 9, the Classic compatibility environment has some—well, odd little quirks. Here's our list of basic things you should know.

- To run programs in the Classic layer, you'll need Mac OS 9—Mac OS 8.6 and earlier won't work—and 128MB of RAM (although Mac OS X itself only needs 64MB, the Classic application requires a big chunk of memory on top of that).
- The Classic application is a lot like the regular Mac OS 9, which means you should shut it down properly when you aren't using it and restart it when a Classic application crashes.
- Classic actually consists of two parts: Classic.app and TruBlueEnvironment. These are roughly equivalent to the Finder and the System under Mac OS. Classic.app is the bit you see while running Mac OS 9 on Mac OS X, while TruBlueEnvironment is a lower-level process that supports Classic.app and any other Classic programs. Don't be surprised if Classic.app quits when you're installing software—think of it as akin to the Finder quitting when you install a program in Mac OS 9.

WILL MY PERIPHERALS WORK?

Unfortunately, the hardware picture under Mac OS X isn't nearly as pretty as the software picture. Apple couldn't build a Classic hardware compatibility layer for a couple of reasons. First, allowing traditional Mac OS 9 drivers to get at hardware (such as printers and Palms) defeats the purpose of basing a system on a kernel with protected memory and protected hardware access. If one of those drivers has a bug or grabs a piece of hardware when another bit of software is expecting exclusive rights, you could end up with a crash—and we have enough of those in Mac OS 9.

The only solution is to write a Mac OS X driver for each specific device. This driver must play nicely with the Mac OS X kernel—that is, it should route its hardware access requests to the kernel, which in turn passes them on to the hardware, thus preventing crashes.

Unfortunately, getting our peripherals up to speed requires that manufacturers rewrite the drivers for each bit of hardware from the ground up—something software developers don't have to worry about, thanks to the Classic environment. Hardware developers, on the other hand, must rewrite the drivers to act appropriately with Mac OS X, otherwise the associated devices won't work at all.

What Works—and What Doesn't

The pieces of hardware most likely to work are those that require the most basic driver support (which Apple has kindly provided): keyboards, mice, USB hubs, and storage devices such as any hard drives and CD-ROM drives, including FireWire drives. Just don't count on burning CDs with your USB or FireWire CD burner just yet, since these require drivers that haven't yet released. Some third-party video cards (such as the 3dfx Voodoo 5 5500) work, although they can't provide any hardware acceleration. ADB-to-USB converters still work, but we wouldn't count on their reliability beyond keyboards and mice. At this point, it's a hit-or-miss affair, with everything except the most basic functions disabled.

What You Can Do About It

Unfortunately, you can't do much to make your hardware work with Mac OS X Public Beta. You just have to wait for the release of a Mac OS X driver for your particular piece of hardware. But many hardware companies (including Adaptec, Canon, Epson, Hewlett-Packard, and Palm) are working on drivers as we speak. Keep checking the manufacturers' Web sites for updates.

OS X Xposed

The Third Party Has Just Begun

It looks as if the developer relations team at Apple has done Steve Jobs proud (otherwise, they'd get fired). We talked to a number of third-party software developers to find out about their plans for Carbonizing your favorite apps, and we found that many have already invested months, even years of work. Here's a glimpse at a few apps (commercial and shareware) in the works and what they look like according to the world of Carbon.

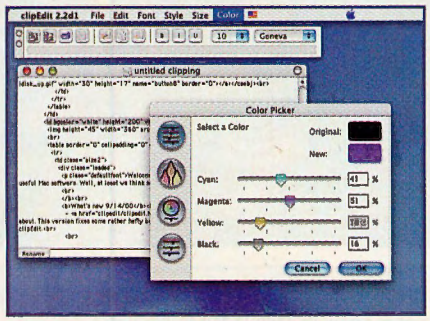
The Company: Corel (www3.corel.com)
The Product: Bryce

3D worlds look so much prettier when they're running in Aqua. This image comes from the Carbonized version of Bryce, which you can expect around the time Apple ships the final version of OS X.

The Company: REAL Software (www.realbasic.com)
The Product: REALbasic

If you want to be like Ian (and we know you do), head over to the REAL Software site and download the prerelease version of an OS X–native REALbasic.

The Company: Everyday Software (www2.iastate.edu/~cosy)
The Product: ClipEdit



ClipEdit, a text and picture clipping editor, is a shareware app due out even before Mac OS X final.

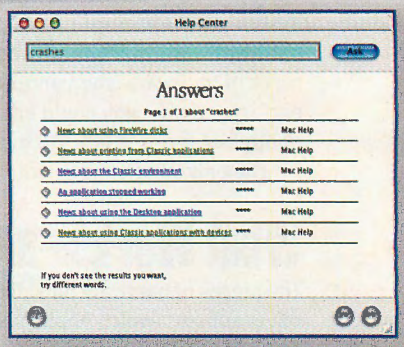
The Company: FileMaker (www.filemaker.com)
The Product: FileMaker Pro

Event planning and asset management just got a lot more enticing in the Carbonized version of FileMaker 5, due out shortly after Mac OS X 1.0 ships.

Troubleshooting

After all of the hype surrounding Mac OS X—especially the bit about its ironclad invulnerability thanks to protected memory—you might think you couldn't possibly run into any trouble when using it. Well, that's not exactly the case. Remember that Mac OS X Public Beta is a beta, and you're going to run into problems ranging from mysterious issues with system services (such as AppleTalk) to full-blown funkiness. But that's why we're here—to act as human guinea pigs.

Here are some common problems—complete with solutions—to some of Mac OS X PB's woes. You should also make use of the Mac Help feature available in Mac OS X PB to see if it has answers to other problems you might encounter. This application, which looks a lot like the help system in Mac OS 9, keeps itself up-to-date via Apple's help servers, and hopefully it can answer all of your questions. To call it up, choose Mac Help from the Help menu and enter your question in the search box.



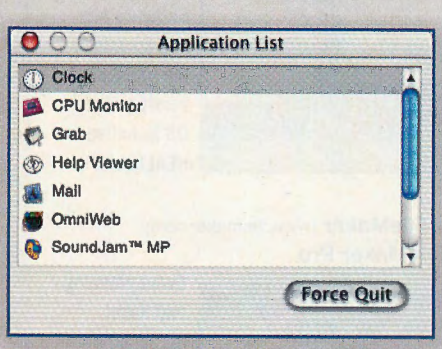
Mac OS X's Help application is Internet-savvy and can reach out to Apple's servers to get the most up-to-date help information.

The Problem: Mac OS X seems to have locked up.

What's Going On: Probably only *part* of Mac OS X has locked up. Remember that a locked-up user interface is almost indistinguishable from a locked-up system, so just because your Desktop application is frozen doesn't mean the rest of the system isn't working perfectly.

The Solution: Fortunately, Mac OS X *is* a truly modern operating system. It has preemptive multitasking and protected memory, meaning that even if an application crashes, it shouldn't lock up the whole system. This means two things: First, you should be able to switch out of the locked-up application to the Desktop to do something about the whole mess. Second, you can use the new and improved Force Quit command to make the misbehaving application take a dirt nap without ruffling the feathers of the whole system.

To escape the locked-up application, click the Dock, which forces Mac OS X to switch out of that application. Then do a Force Quit by pressing Command-Option-Escape. This brings up the Force Quit Application Window, which lists the currently running applications. Choose the offending application and click the Force Quit button. If the application you're quitting is a Carbon or Cocoa application, you can go about your work as if nothing has happened. If, on the other hand, you're force-quitting a Classic application, you should probably restart the Classic environment. To do that, click the Classic icon in the dock, then select Shut Down Classic Environment from the Environment menu.



The new and improved Force Quit command gives you a list of all running applications. Just choose one and click Force Quit.

The Problem: No, no, you don't understand! Not only is OS X locked up, but it's speaking in tongues and dumping hexidecimal numbers on me!

What's Going On: You've encountered a bug in a very low level of the system—Mach, BSD, or a hardware driver. Mac OS X can't protect itself from bugs this deep in the system, so they cause realio-trulio system crashes, just like you'd see in the traditional Mac OS.

The Solution: At this point, your system is so thoroughly scrambled that your only choice is to reboot. Before you do, though, write down the text that you see onscreen. When you're done rebooting, go to Apple's site and send in a feedback form with information on precisely what appeared on the screen, along with a list of what you've got plugged into your machine. This sort of thing should happen less frequently as Mac OS X matures.

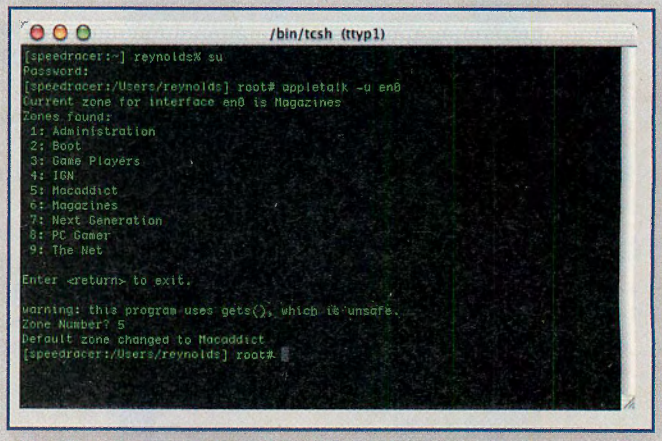
The Problem: My AppleShare printers won't show up in the Print Center.

What's Going On: For some reason, Mac OS X doesn't always start up AppleTalk even when you tell it to do so in the proper settings panel.

The Solution: While Apple promises you shouldn't have to pop a terminal window to do *anything* in Mac OS X, here's one instance where that might be your only choice. To start up AppleTalk, open the Terminal application (it's in the Utilities folder inside the Applications folder) and type the following commands with a return after each one:

`su` (The app will ask for your password—go ahead and enter it.)

`appletalk -u en0` (This starts up AppleTalk on Ethernet interface zero—the default.)



Although this green window looks a bit daunting, it should get your AppleTalk printer to show its face in the Print Center.

At this point, you may have to choose an AppleTalk zone. After you do so, quit Terminal, then try to find your printer in the Print Center application. It should show up. Important: Make sure AppleTalk is active in the Network portion of the System Preferences, then restart your Mac *immediately* after doing this. Bringing up AppleTalk this way is essentially a hack, so it might cause some instability.

The Problem: I can't print to my USB or serial printer when using a Classic application.

What's Going On: Mac OS X Public Beta doesn't have a lot in the way of USB printer support, and Classic can't talk to USB printers yet.

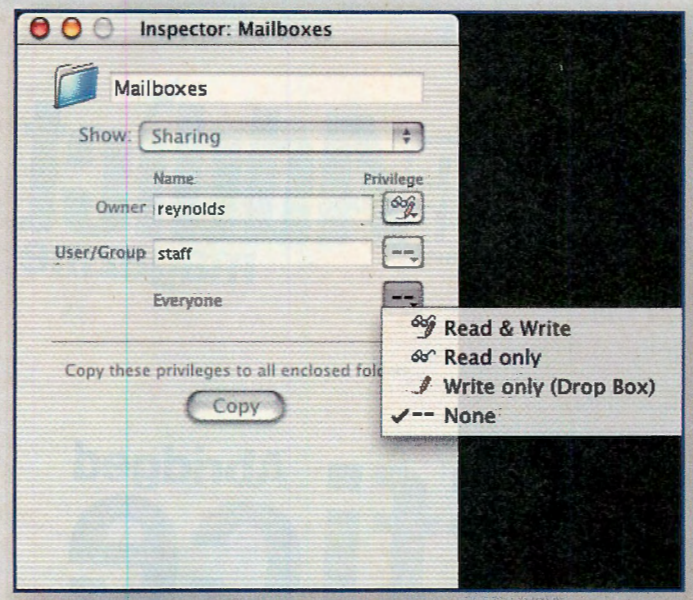
The Solution: Unfortunately, there is none right now. Mac OS X Public Beta can *only* print to AppleTalk printers from the Classic environment. If you try to print to a USB printer, you're out of luck, and if you try to set up a serial printer using the Classic Setup Assistant, you'll crash Classic. Although Apple hasn't promised any fixes, your best bet is to wait until someone creates a workaround, or until Apple builds support into Mac OS X—this is likely for USB printers, but not so likely for older serial printers. So if you own a serial printer and plan on using Mac OS X, it's probably time to start thinking about buying a new printer.

The Problem: My Classic application complains about a disk error when launching.

What's Going On: Classic applications assume that Unix file permissions (a way of protecting important files and directories) don't exist, so these apps try to write files to directories in which they don't have permission.

The Solution: If you want to take the risk that your beta operating system can hose *all* of your hard drives, log out of Mac OS X and log back in using the *root* user ID and your normal password. As we mentioned before, the root account is all-powerful and therefore exceedingly dangerous. For instance, when you're logged in as root, you can do anything—including delete every file on your hard drive—with a few commands in the Terminal application. Use this power at your own risk—it's a tremendous lot of power that can be used for good or for evil. Be careful.

Once you're logged in as the root user, try to figure out to which folder the application is trying to write (think about what the program might be doing; in the case of a graphics program, for example, it might be trying to make changes to a ColorSync profile). Then select that folder and choose Show Inspector from the File menu (or press Command-I—sound familiar?). Choose Sharing from the pop-up menu and change the permissions for that application so you have Everyone set to Read & Write. Log out, then log back in as yourself. If you guessed the right folder, your application should run just fine.



By changing this option from None to Read & Write, you let everyone and everything—including anonymous applications—read from and write to files in that folder.

OS X Xposed

General Troubleshooting Formula

If Mac OS X Public Beta is giving you fits, follow these tips to restore some sanity. If it's still flaky after you try one step, move on to the next one.

Step 1 Quit any applications that are acting weird and restart them.

Step 2 If you're using the Classic layer, restart that.

Step 3 Log out of Mac OS X and log back in.

Step 4 Restart Mac OS X.

Step 5 Reinstall the application that's acting up.

Step 6 If your Classic applications are uppity, restart into Mac OS 9 and then run the latest version of Disk First Aid from there. Once that's done, restart into Mac OS X using the System Disk control panel. Although Mac OS X ships with Disk Utility, we're suspicious of a beta disk repair utility on a beta operating system, so we advise using the well-tested Disk First Aid utility instead—but only from within Mac OS 9.

OS X Xposed

Other OS X Trouble Spots

If you comb through Apple's Help files, you'll read about several other acknowledged problems in the Public Beta, some of which Apple may have fixed by the time you read this.

- On USB extended keyboards, the right-side Option and Control keys don't work. You'll have to use the left ones.
- Don't turn off external FireWire hard drives before disconnecting them—you may crash Mac OS X.
- You can't change file names in List view.
- If you try to rename a file in the Trash, you'll crash the Desktop application.
- You can't necessarily connect to AppleShare servers via AppleTalk. You'll have to connect to them via TCP/IP instead by choosing Connect To Server from the Go menu.
- Mac OS X can't deal with files larger than 4GB.

Ian Sammis and David Reynolds are both looking forward to catching up on a lot of sleep—that is, after they play a few games of Captain Magneto.

MacAddict magazine presents

Office Abridged 2001 :manual

A visual guide to customizing and exploiting the best new features of Word, Excel, PowerPoint, and Entourage

by Maria Langer

Microsoft doesn't release a revision of Office so much as inflict it. Due to a combination of genre dominance (uh, what monopoly?) and "distinctive" file formats, Microsoft is king when it comes to persuading consumers to upgrade.

Luckily for you, the newest version of Office 2001 is actually worthy of your money. It brings much-welcome updates to Word, Excel, and PowerPoint, and offers a new application—Entourage, which incorporates Outlook Express and manages email, contacts, tasks, and appointments. Besides offering greater ease of use, Office 2001 is quite a looker, bearing a striking resemblance to Aqua, even though the program is not yet OS X–native. We hate to say it, but it appears that Microsoft has again proved that it does care about the Mac community by adding features long outstanding on our wish lists. (See *Reviews*, this issue, p58.)

Of course, we did (somewhat gleefully) find one small shortcoming to pick on: Microsoft Office 2001 now ships in sleek CD-case containers that leave no room for a manual. Sure, there's help—online as well as via the odious Office Assistant—but who really likes going back and forth to the Web or relying on a gyrating Mac-on-legs for help?

That's why you have *us*. We're here to provide your very own manual. But before your snooze alert goes off, you should know that our manual is strictly of the Cliffs Notes variety—we just give you what you need to know to pass that pop quiz.

Without further ado, here's a visual tour of Office that'll show off its new interface, tell you about cool new features and how to use them, and explain how you can customize Office so it looks and works just as you want.

The presidential debates may be over, but the debates never end at www.macaddict.com/debate.

ILLUSTRATION BY DAVID "STICKY FINGERS" ROSS

Office: An Overview

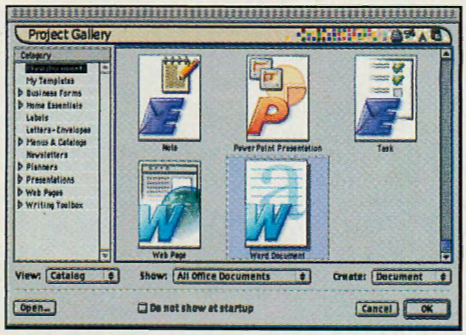
For Office 2001, Microsoft has made an extra effort to ensure consistency from one application to another. Rather than four separate programs, each with its own similar but distinct interface, Office apps now share more features than ever before, making it easier to move between components.

The Best of Office 2001

1. Templates, Wizards, Project Gallery, and Clip Art

Templates and wizards aren't new in Office 2001, but they certainly have multiplied and matured. They're nicer-looking and easier to use (with fewer styles and smarter wizards). Another improvement is the clip art gallery, which features more art and allows you to add your own art in any format Office supports (rather than automatically converting the art to a bitmap). Best of all, you can add a piece of clip art to your file by simply dragging it in from the Clip Gallery.

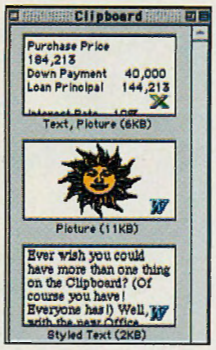
How to Do It: The Project Gallery window appears automatically when you launch Word, Excel, or PowerPoint, or you can open it manually by choosing File, Project Gallery. Select the template or wizard you want. For clip art, go to the Insert menu and select Picture, Clip Art to display the Clip Gallery window. Click a category name or enter a search word, then click Search to display pictures.



Use the Project Gallery to select a type of document to create based on a template or a wizard.

2. Office Clipboard

Ever wish you could have more than one item on the Clipboard? (Duh—of course you have.) With the new Office Clipboard and Collect And Paste feature, you can. But wait—there's more! The Office Clipboard retains its contents even when you shut down your Mac. Of course, in typical Microsoft fashion, there's one caveat: You must have the Office Clipboard open to retain multiple clips.



How to Do It: Choose View and select Office Clipboard to open the Office Clipboard palette. When you copy a selection, the program adds it to the Office Clipboard. You can use buttons at the bottom of the Clipboard window to paste selected clips into the document—or easier yet, just drag and drop.

The Office Clipboard holds multiple clips so you can go nuts cutting and pasting.

3. Formatting Palette

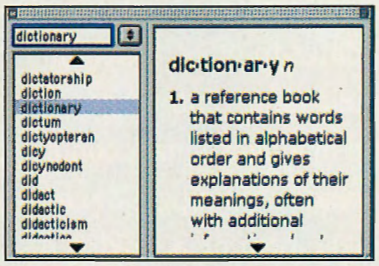
Rather than squeezing everything into a narrow bar at the top of the screen, the floating Formatting Palette can expand to show or retract to hide groups of formatting buttons and menus like font styles and spacing. In addition, the palette's options change depending on what you select in the document window. Plus, the palette turns transparent when you drag it—and the app isn't even Carbonized!

How to Do It: If the Formatting Palette doesn't appear by default, go to View and select Formatting Palette to display it. Click the triangles to display or hide groups of formatting options.

4. Dictionary

Microsoft Word has long needed a good, old-fashioned dictionary, but no longer. The whole of Office 2001 now includes a one, leaving you no excuse to misuse a word—ever.

How to Do It: Select a word and choose Tools, Dictionary. You can also Control-click a word and select Define from the contextual menu.



Say good-bye to your 20-pound *Webster's*—there's a new dictionary in town.

5. Save As Web Page

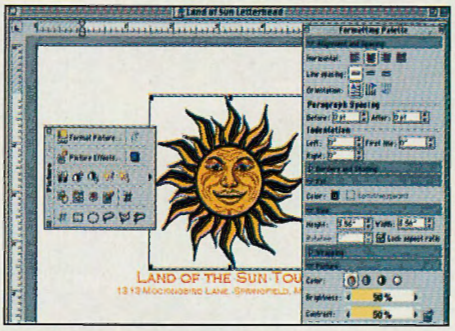
Though Office applications may not be the best tools for creating Web pages, Save As Web Page sure comes in handy when you already have your Web page information in an Office document. One drawback: The Web pages Office creates may not be compatible with all browsers. For example, Entourage can create a spiffy online calendar that displays just fine in Internet Explorer 4.5 but doesn't look nearly as nice in Netscape Communicator 4.7 (who'd a thought?).

How to Do It: Go to File and choose Save As Web Page.

6. Picture Editing

Office applications now let you change the brightness, contrast, size, and color of pictures, as well as select, crop, and apply special effects like Emboss and Charcoal. Office 2001 also supports the TWAIN interface, making it possible to import pictures directly from scanners or digital cameras right into documents. Office supports Photoshop-compatible plug-ins—and has even learned how to spell Photoshop correctly (instead of insisting that you capitalize the *s*).

How to Do It: Select a picture, and the appropriate tools appear in the Formatting Palette and on the Picture toolbar.

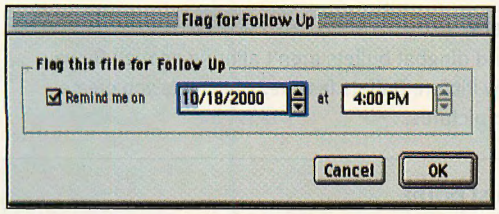


It's not Photoshop, but with the picture-editing tools in Office applications, you may not need a dedicated graphics-editing app.

7. Flag For Follow Up

Sometimes you start building an important document but can't finish it in one sitting. Or you get an email you mean to answer...eventually. The Flag For Follow Up feature is a great way to remind yourself of these tasks.

How to Do It: Click the Flag For Follow Up button (the icon looks like a flag) in the Standard toolbar, then enter reminder information in the dialog box that appears. Even if you don't have the application open, the reminder will pop up in a timely manner.



How can you forget to finish work on a document when the Flag For Follow Up feature reminds you?

8. Help for Windows Docs

Since PCs aren't smart enough to open a file without a three-character file extension at the end of its name, our computers have to be smart enough to add that extension for them. Fortunately, Office 2001 applications can do just that.

How to Do It: Go to File, choose Save As, and mark the Append File Extension check box.

Customizing Office

1. Customize Toolbars, Menus, Shortcut Keys, and Appearance

You can customize the interface and other functions of Word, Excel, and PowerPoint by playing with the Customize dialog box.

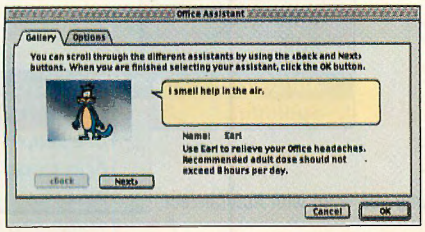
How to Do It: Choose Tools and select Customize to display the Customize dialog box.

To customize a toolbar, drag commands from the scrolling list in the Commands tab into the toolbar or menu.

2. Swap Out—or Kill—the Loathsome Office Assistant

You may find Max, the Office Assistant (no relation to *MacAddict*'s beloved mascot), cute (though we doubt it), but his Classic Mac look is a little dated, to say the least. Luckily, you can ditch him by choosing another Office Assistant. Or, if the Office Assistant makes your blood boil (as it does ours), get rid of it once and for all.

How to Do It: Use the Value Pack Installer on your Office 2001 CD-ROM to install other Office Assistants. Then launch any Office application, click the Office Assistant, and click the Options button to display the Office Assistant dialog box. Click the Gallery tab to display the wide array of Office Assistants. Click OK when you've decided upon a new helper. To get rid of the Assistant, choose Help, select Turn Assistant Off, and enjoy working in peace.



The Office Assistant Gallery provides welcome animated alternatives to the two-legged Mac.

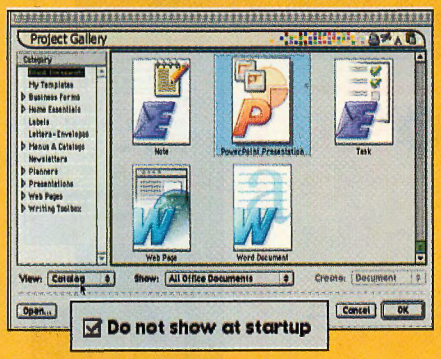
Features We Hate (and How to Fix Them)

Not every Office feature deserves praise—some of them make you want to pull your hair out. But now you have the power to fix those problems. Here we show how you can annihilate Office's worst ugliness.

1. Project Gallery

The Problem: You might like the Project Gallery popping up in your face every time you launch a Microsoft Office program—but then again, you might not. (Personally, we hate it.)

How to Fix It: Click the Do Not Show At Startup check box at the bottom of the Project Gallery dialog box. When you click OK, the darn thing won't appear again unless you go to File and choose Project Gallery.



Disabling the Project Gallery makes us happier than pigs in mud.

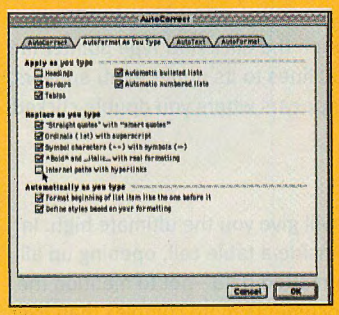
2. Consistent Shortcut Keys

The Problem: Microsoft thought it was doing us a favor when it changed Excel's shortcut keys so they were consistent with Word's. But anyone who has spent day after day, year after year pressing Command-K to delete cells or Command-I to insert cells will hate the change—although it may not bother Excel dilettantes.

How to Fix It: Sadly, we can't find a fix. Creating a custom toolbar that contains these commands is about your only choice, since Excel does not let you create your own key combinations. (Boo hiss.)

3. AutoFormat

The Problem: When you enter a URL in a Word document, the program formats it as a blue, clickable link. But isn't it a pain to edit those URLs when every time you click one, Word launches your Web browser?



How to Fix It: Go to Tools, select AutoCorrect, and click the AutoFormat As You Type tab. Turn off the Internet Paths With Hyperlinks option (and any other option that annoys you) and click OK.

Don't let Word control you or your URLs. Fight back!

4. Entire Word Selection

The Problem: By default, Word selects entire words when you try to highlight more than one word, making it impossible to select just parts of words.

How to Fix It: Choose Edit, select Preferences, and click the Edit tab. Turn off the When Selecting, Automatically Select Entire Word check box.

Word

Word's Interface

Standard toolbar. Word's Standard toolbar includes redesigned buttons, as well as a few new buttons such as Flag For Follow Up and Dictionary. Its close box and move handle make the toolbar easier to close or shift around the screen.

Document window. The Document window sports a refined new look. The icon in the title bar makes it pretty obvious what kind of document you're working with.

Formatting Palette. This new element puts all kinds of formatting commands within the reach of your cursor. Just click triangles to expand the palette and display more options.

Live Word Count. Watch your document grow word by word, page by page.

Office Assistant. In this version it's quicker and easier to turn your little helper off and on—and off again.

The Best of Word

1. Click And Type

The Click And Type feature makes it easy to position text almost anywhere you want it to appear onscreen—very handy for creating title pages in reports.

How to Do It: Switch to Page Layout mode (under the View menu), and position the I-shaped cursor in a blank area of the document where you want text to appear. When the Click And Type pointer (an I-beam pointer with four horizontal lines to its upper right) appears, double-click. The insertion point appears where you double-clicked. You can now start typing.

2. Nested Tables

If tables turn you on, this feature will give you the ultimate high. In Word 2001 you can place a table inside a table cell, opening up all kinds of possibilities for neatly formatted data—not to mention the opportunity to make your Word documents more complex than ever.

	Length	Price
Wickenburg on $25/day Want to see Wickenburg on a budget? Then this tour is for you. See all the sights the tourists come for: the Hanging Tree, the Wishing Well, and the traffic light at the corner of Tegner and Wickenburg Way. Bring a brown bag or cooler, though; this tour does not include food. Rustic lodging in Joe's Barn.	1 day 2 days 5 days	$25 $50 $250
Fine Wickenburg Homes This is an award-winning home tour of the better homes in Wickenburg. Visit up to ten homes, wander through gardens, snoop through closets, snatch snacks from refrigerators. Actual homes may based on whether owners will let us in.	Length 1 day 2 days	Price $300 $595

How to Do It: Create a table using commands under the Table menu. Then position the insertion point inside one of the cells and choose Table. Go to Insert and select Table to create a table within the other one.

Mmmmm...nested tables.

3. Picture Bullets

If round bullets and dingbat bullets aren't alluring enough for you, you'll love the new Picture Bullets feature, which lets you create bullet points from pictures.

- This is the first point.
- This is the second point.
- And this? This is the third point. Pretty fat points, huh?

Take bullets to a new dimension with picture bullets.

How to Do It: Choose Format, go to Bullets And Numbering, and click the Bulleted tab in the dialog box that appears. Click the Picture button to select a picture file from the supplied clip art or your own collection. Word recognizes most common picture formats, including JPEG, GIF, TIFF, PNG, EPS, and Metafile. As you build your bulleted list, the picture you selected appears at the beginning of each new paragraph.

4. Live Word Count

You're currently looking at word 2,479 out of 5,893 words (that number's probably changed by now—please don't start counting). How do you know that without counting every word? Because of Word's new Live Word Count feature. It keeps track of the total number of words in your document, as well as the word you're currently on, right in the status bar at the bottom of the document.

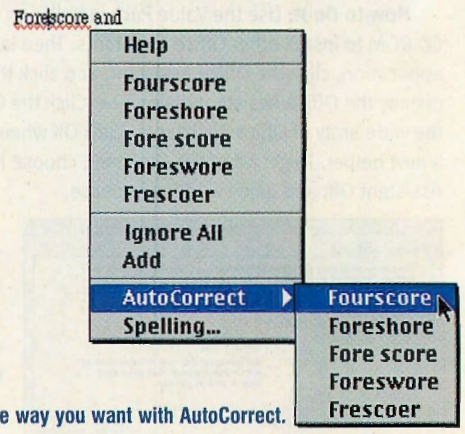
How to Do It: The word count should appear in the status bar at the bottom of the document. If it doesn't, enable it—go to Edit, select Preferences, click the View tab, and make sure the Status Bar and Live Word Count check boxes are checked.

Customizing Word

1. Add Words to AutoCorrect

The AutoCorrect feature is like having a proofreader look over your shoulder as you type. But rather than bug you every time you make a mistake, this proofreader simply corrects your errors automatically. Although Word has many words and phrases preprogrammed into its AutoCorrect feature, you can add more; so when your fingers spell a word wrong, don't just correct it—add it to AutoCorrect.

How to Do It: Hold down the Control key while clicking the misspelled word to display a contextual menu. Then choose the correct spelling from the AutoCorrect submenu. The next time you make that error, Word will fix it for you.

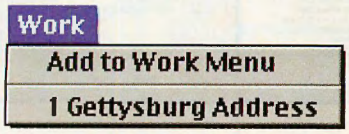


Teach Word to spell the way you want with AutoCorrect.

2. Make Favorite Docs Accessible

If you open the same documents over and over again, give yourself easy access by adding them to the Work menu.

How to Do It: Open the document you want to add to the Work menu. (If it's brand-new, make sure you've saved it.) Then choose Work and select Add To Work Menu. The next time you pull down the Work menu, the document's name appears. To remove the document from the menu, press Command-Option-minus sign (-) so the mouse pointer looks like a bar. Then select the document you want to remove from the menu.

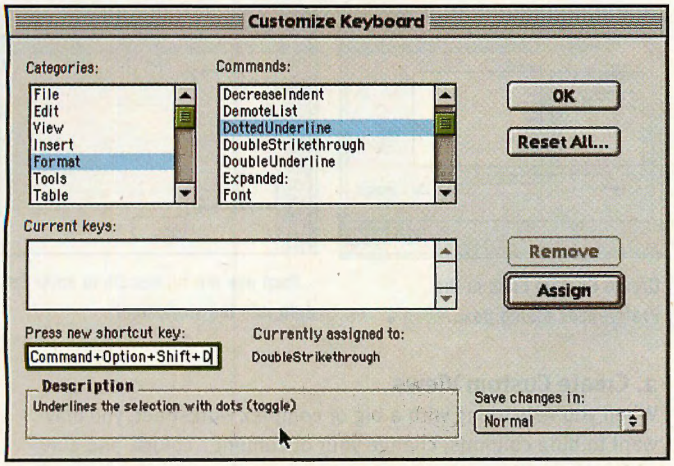


You can customize the Work menu for quick access to the documents you use most often.

3. Modify and Add Shortcut Keys

Word has dozens of predefined shortcut keys, but if they're not enough or you just like them, you can add more or modify them (unlike in Excel, where you're stuck with what you get).

How to Do It: Choose Tools, select Customize, and click the Keyboard button to display the Customize Keyboard dialog box. Use the Categories and Commands scrolling lists to locate and select the command for which you want to create or modify a shortcut key. Then click in the Press New Shortcut Key edit box and press the key combination you want to assign that command. If the shortcut key is already assigned to another command, Word will tell you so. Click Assign to set your shortcut; if that combination has another assignment, it will change to what you've just programmed.



You can add, remove, or modify Word's shortcut keys—whatever your little heart desires.

April Fool's Day Project

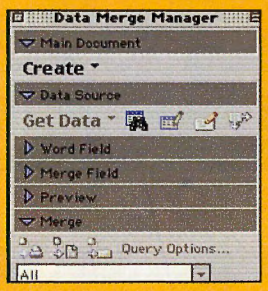
Picture the look of despair on your coworker's face (or your boss's, if you're daring) if each time he or she presses Command-S, the dictionary appears, and if Command-C suddenly makes selected text turn bold. You can make that happen by rearranging a bunch of shortcut keys in someone else's copy of Word. Whenever you've had enough kicks from your joke (admittedly, that may be never), just click the Reset All button in the Customize Keyboard dialog box to fix the mess before your coworker loses that last trace of sanity.

Data Merging Made Easy

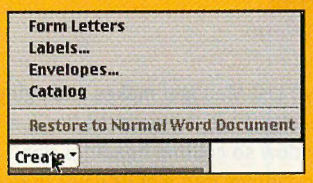
Word has had a mail merge feature for a long time, but Microsoft dusted it off and spruced it up for Word 2001. The Data Merge Manager palette takes some of the confusion out of mail merge, making it easier than ever to create form letters, mailing labels, envelopes, and catalogs. Best of all, Word can now peek inside your Entourage address book or FileMaker Pro database for lists of information. That means you don't have to create databases within Word (that was a bit silly, wasn't it?) to perform a merge. Here's how to do it.

Step 1. Create or open the document you want to use for your data merge.

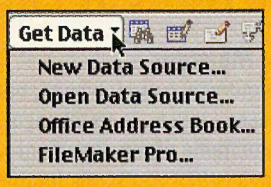
Step 2. Go to Tools and choose Data Merge Manager to display the Data Merge Manager palette.



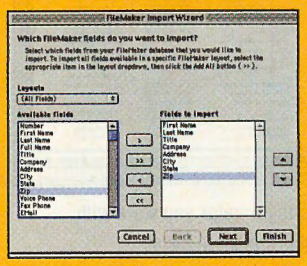
Step 3. Choose the type of document (form letters, labels, envelopes, or catalog) you want to create from the Create menu under Main Document.



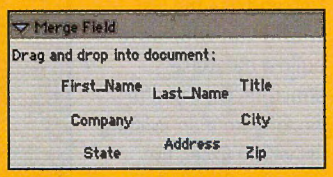
Step 4. Choose the source of your information (for instance, FileMaker Pro, your Office address book, and so on) from the Get Data menu under Data Source.



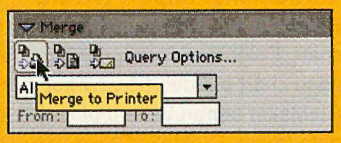
Step 5. If you chose FileMaker Pro, use the FileMaker Pro Import Wizard, which appears automatically, to select the fields and records to import.



Step 6. Drag field names from the Data Merge Manager's Merge Field area into the document window to add your merge fields.



Step 7. Click one of the buttons in the Data Merge Manager's Merge area to merge the document to a printer, a file, or an email.



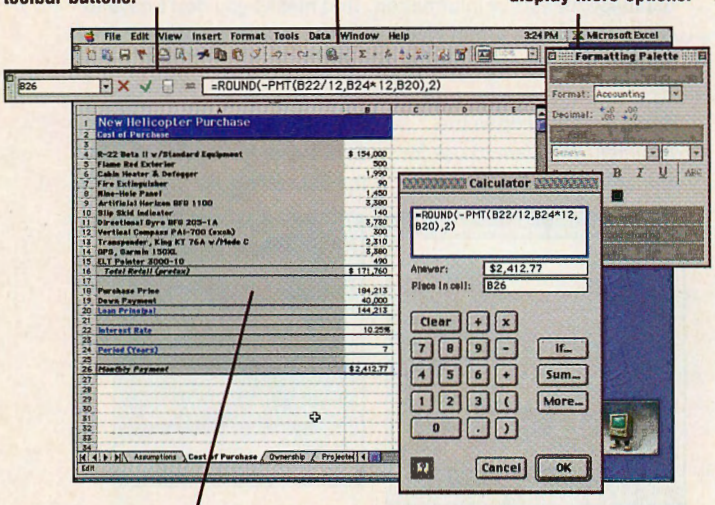
Excel

Excel's Interface

The Formula bar. You can move it around onscreen or hide it. The buttons even look like toolbar buttons.

The Standard toolbar. Excel's Standard toolbar includes redesigned buttons, as well as a few new ones.

The Formatting Palette. Click triangles to expand the palette and display more options.



The Document window. It's slicker and nicer.

The new Calculator. Especially good for Excel newbies, the calculator makes writing formulas easier. Click the Calculator button on the Formula bar to display it.

The Best of Excel

1. List Manager

The brand-new, sexy (oh yeah, baby!) List Manager makes managing databases (or lists, in Excel lingo) easier. First, it places the list in a separate frame of the document window so column headings don't disappear when you scroll. It turns headings into menus you can use to select criteria for filtering the list's contents or sorting data. Finally, it's smart enough to know when to carry formatting and formulas down to new rows as you add records to the list.

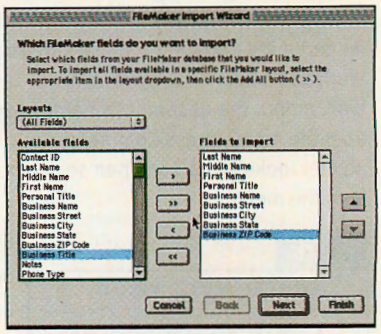
How to Do It: To create a list from scratch, choose Insert, select List, and use the List Wizard that appears to build a database structure. Or, if you're working from an existing list within Excel, the program will ask if you want to convert the data to a list object. Click Yes.

The List Manager helps you work with database information in Excel.

2. FileMaker Import Wizard

FileMaker Pro is the king of database programs, but it can't draw a chart. Excel may not be the best database solution, but it's a darn good chart builder. So why not marry the two? Excel 2001's FileMaker Import Wizard plays preacher, making it easy to import data from a FileMaker Pro database into Excel.

How to Do It: Choose File, go to Open, and select a FileMaker Pro database file. Then use the FileMaker Import Wizard to select the fields and records to import.



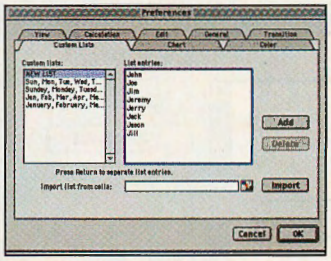
The FileMaker Import Wizard is a wiz at making your FileMaker Pro data work in Excel.

Customizing Excel

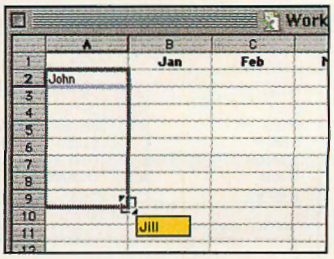
1. Make Custom Lists

Excel's Custom List feature makes it easy to fill in cells with a consecutive series of values. Excel has some series (such as days and months) programmed in, but you can add your own.

How to Do It: Choose Edit, Preferences, and click the Custom Lists tab in the Preferences dialog box. Enter the values for your list in the List Entries box, pressing Return after each one. Click Add when you're done. To enter the values of your custom list into Excel, enter the first value in a cell. Then, with the select tool active (it looks like a box with arrows at two corners), drag the fill handle across a row or down a column. When you release, the values magically appear.



Create Custom Lists in the Preferences dialog box...



...then use the fill handle to enter list data into the worksheet.

2. Create Custom Views

When you're working with a big or complex worksheet, you may want to hide columns, change your document's colors, and play with other settings. You can set up custom worksheet views and switch from one to another with a few clicks, making for a much more exciting Excel experience. (Okay, maybe not all *that* exciting.)

How to Do It: Set up the worksheet as you want to view it, then go to the View menu and choose Custom Views. Click Add and give your current spreadsheet view a name. Repeat this process for each view you create. When you want to switch to another view, go to View, choose Custom Views, select the one you want to see, and click Show.

3. Save Multiple Files as One

Instead of having to open each Excel file individually, you now can use the Workspace feature to group workbooks so you can open them in one swoop.

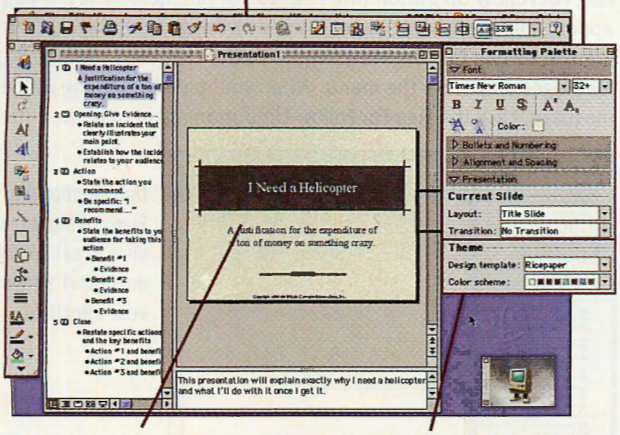
How to Do It: Open and arrange all the workbook files you want to include in the workspace. Choose File, select Save Workspace, and rename the workspace more descriptively. When you need to work on the project, just open that file.

PowerPoint

PowerPoint's Interface

The Standard and Drawing toolbars.
The two toolbars that appear by default include redesigned and all-new buttons.

The Formatting Palette.
This floating palette makes all kinds of formatting commands easily accessible.



Three functions, one window.
This new three-pane Normal view eliminates the need to switch between views to work with outlines, slides, and notes.

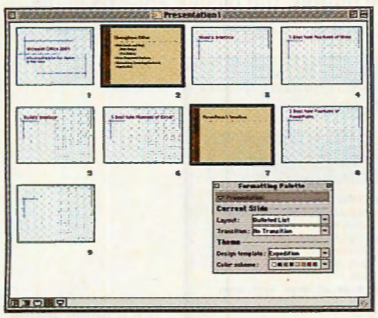
Easy-to-locate templates, themes, and color schemes.
No more do you have to hunt through PowerPoint's menus and dialog boxes to change your presentation's overall appearance.

The Best of PowerPoint

1. Multiple Design Templates

One problem with previous versions of PowerPoint is that it limited users to one template per presentation file—meaning all of the slides had to adhere to the same boring look. The new Multiple Masters feature makes it possible for you to impress the pants off your audience—or prove you have no design sense whatsoever—by letting you use as many templates as you like in a single presentation.

How to Do It: Enable the Multiple Masters feature—go to Edit, select Preferences, and click the Advanced tab. Check the two check boxes in the Multiple Masters area and click OK. Switch to Slide Sorter view (under View), then hold down the Shift key and click each slide to which you want to assign a different template. Choose the template you want from the Design Template menu on the Formatting Palette.



To give your viewers a real headache, apply two completely different templates.

2. Three-Pane View

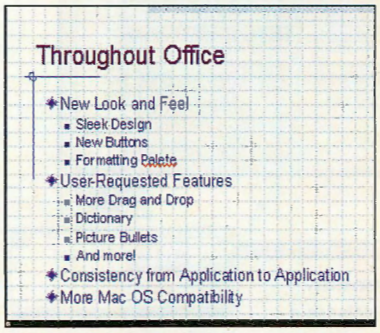
PowerPoint has always displayed the contents of a slide show in a number of separate views: Slide, Outline, Note, and Slide Sorter. Anyone who liked to work with all of the views had to spend a lot of time switching from one to another. But PowerPoint 2001 has a new three-pane window (it calls this Normal view) that simultaneously displays the three most popular views—Slide, Outline, and Note.

How to Do It: Normal view appears by default. To switch to another view, go to the View menu or click one of the buttons at the bottom left of the PowerPoint screen.

3. AutoFit Text

Back in the old days, when you entered more text than would fit on a slide, you'd spend the next 30 minutes editing and formatting text to squeeze it in. Hallelujah! Those days are over. PowerPoint 2001 can manipulate your text to fit it onto a slide (within reason).

How to Do It: Just create a slide. If you enter too much text, PowerPoint automatically changes the line spacing and font size as necessary to make it fit. Don't get carried away—you can't squeeze a novel onto a slide.



Go ahead, exercise your bigger vocabulary—the AutoFit Text feature can fit all those long words on a slide.

Customizing PowerPoint

1. Make the Startup Display Less Annoying

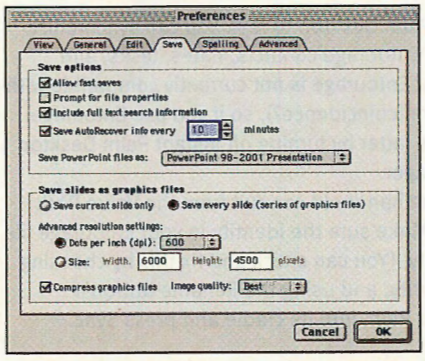
If the Project Gallery and New Slide dialog boxes that pop up when you launch PowerPoint are driving you insane, disable the little buggers.

How to Do It: Choose Edit, go to Preferences, and click the View tab. Then set the options in the top half of the dialog box to determine what you see when you launch PowerPoint.

2. Customize Settings for Graphics Files

PowerPoint can save individual slides as graphics files. You can then print these files on a high-resolution or 35mm-slide printer and take your presentation on the road without a computer.

How to Do It: Go to Edit, choose Preferences, and click the Save tab. Set options for dots per inch or size and compression in the bottom half of the dialog box—the settings will vary depending on how you want to use the graphics. Generally speaking, match the requirements of the output device—for example, 600 dpi for a 600-dpi color laser printer. When you want to save a slide as a graphics file, go to File, select Save As, and pick any of the supported graphics formats.



Save Preferences lets you control how you save slides as graphics files.

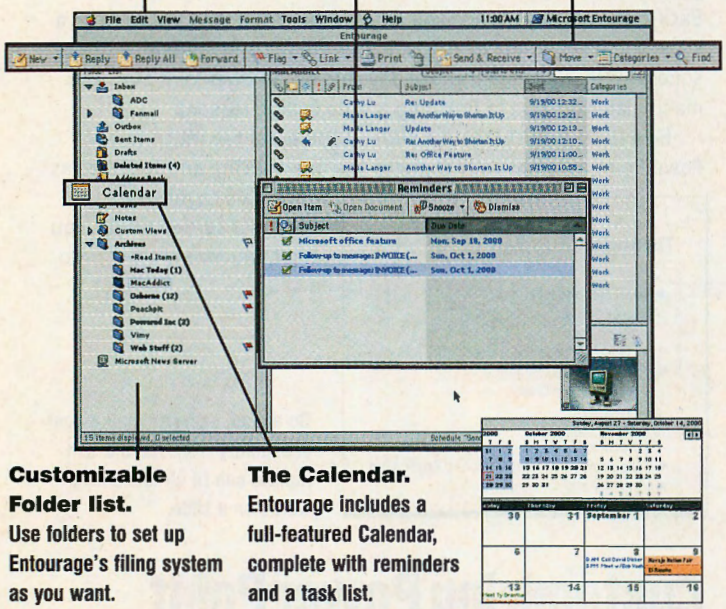
Entourage

Entourage's Interface

Main window. Look familiar? It's Outlook Express with a fancier name.

Reminders window. Like a pesky parent, this window bugs you about pending tasks for which you've set reminders.

Frequently used buttons. Easily accessible at the top of the main window, this toolbar contains just about every command you'll need.



Customizable Folder list. Use folders to set up Entourage's filing system as you want.

The Calendar. Entourage includes a full-featured Calendar, complete with reminders and a task list.

The Best of Entourage

1. Junk Mail Filter

Junk mail is out of control, jamming up everyone's email box. But Entourage's Junk Mail filter can help tame it by reading each message you receive and, based on predefined criteria, determining whether it might be junk mail. It then colors the message gray, making it really easy to spot (and delete).

How to Do It: Choose Tools, select Junk Mail Filter, turn on the Enable Junk Mail Filter, then set the Sensitivity level around Average to judge how well this option works—we found that setting it higher categorized a few too many real messages as junk. If you want to exclude certain domains from the filter, enter them in the bottom half of the dialog box.

2. Palm Sync

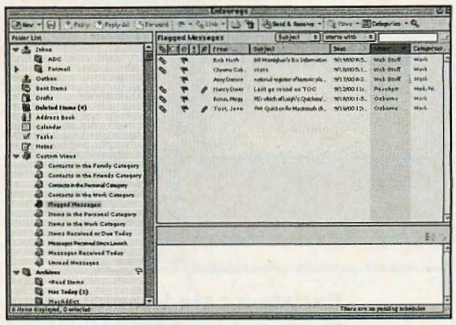
If you've got a Palm, put Palm Desktop to rest. You can synchronize your Palm with all of your Entourage contacts, dates, tasks, and notes. Note, however, that Entourage is not currently compatible with the Palm Desktop software (coincidence?), so if you use Entourage, make sure you disable the latter by turning off Instant Palm Desktop in Apple's Extension Manager.

How to Do It: Install the handheld conduit from the Value Pack folder on your Office CD. Make sure the identity in your Entourage file matches your Palm identity. (You can check and fix this by choosing File, selecting Switch Identity, and using the Rename button if necessary.) Then pop your Palm into its cradle and press Sync.

3. Flag For Follow Up

If you get dozens of email messages, sometimes it's hard to keep track of which ones you intend to honor with a response. Before you know it, they're buried amid 200 other messages and end up lost. In Entourage, you can use the flag to find them.

How to Do It: Select the message you want to flag and click the Flag For Follow Up button (the flag icon in the toolbar). A tiny flag icon appears beside the message. To view all flagged messages, click the triangle beside Custom Views in the Folder List, then click the Flagged Messages view from the menu. When you're done working with a message, click the Flag For Follow Up button again to remove the flag.



Double-click the Flagged Messages view to see all the email that awaits your attention.

Customizing Entourage

1. Add Schedules

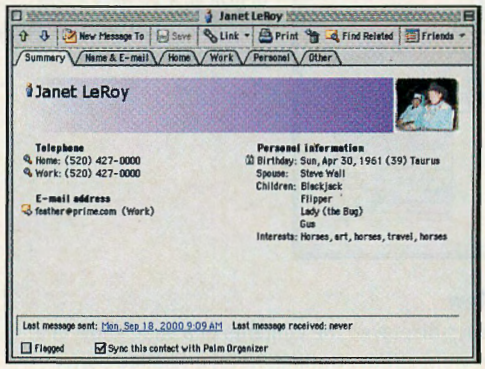
You can tell Entourage to perform any number of dull or repetitive tasks for you via the Schedule feature. For example, you might schedule it to delete all old email messages in a specific folder, check for new mail on a regular basis, or run an AppleScript.

How to Do It: Go to Tools, choose Run Schedule, then select Edit Schedules. Click the New button to display the Edit Schedule window. Add occurrences and actions to determine when the schedule runs and what it does.

2. Put a Face to the Name

Wouldn't it be nice to see a picture of the people to whom you constantly send email? That probably depends on what they look like. Nevertheless, here's how.

How to Do It: Open the address book entry for your target correspondent and click the Personal tab. Drag the icon for a TIFF, JPEG, GIF, or other standard-format picture file onto the box labeled Drag And Drop Image Here. The image appears where you dropped it, resized to fit. Click the Save button. The picture appears in the summary box for that contact.



You'll never forget a face, thanks to this cool Entourage feature.

Maria Langer, a freelance writer, has been writing about Macs since 1990. She's thrilled with Office 2001—she's always wanted her own entourage, and now she has one.

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Let's Go Cupertino!

by Narasu Rebbapragada

New York, Paris, Rome, London—sure, they're all attractive vacation destinations. But try as they might, these travel meccas pale in comparison to one little city tucked away in California's Silicon Valley. In spite of the strip malls, manicured suburban gardens, and smog-infested freeways, it's the obvious getaway for the discerning Mac addict. That's right. It's Cupertino, California, home of Apple's corporate headquarters. Since Cupertino is a mere 45 minutes from our office, we felt a responsibility, a moral obligation even, to bring to you a look at the city behind the company. So here you have it, *MacAddict*'s insider's guide to Cupertino. Read this and you'll feel as local as Steve Jobs—just a lot less famous.

A Brief History of Cupertino

Long before Cupertino became a red-hot travel destination, it was a pit stop on the way to the San Francisco Bay Area (surprising, we know). In 1776, a group of explorers heading up the California coast camped at the spot and named it after the patron saint of that day, Saint Joseph of Copertino (this is not a typo—do not write in). A village sprang up, and by the 1800s, settlers were busy planting wine grapes on Cupertino's hills and flatlands. Around 1900, when a bout of phylloxera (a root louse) destroyed 75 percent of Cupertino's vineyards, farmers began planting fruits and nuts, which perhaps gave birth to this area's penchant for eccentricity. Fast forward to the 1960s: Cupertino's first office park emerges. Then in 1978, Steve Jobs and Steve Wozniak moved their operations out of the Jobs family garage in Los Altos, California, and into a modest office space on Stevens Creek Boulevard in Cupertino. The rest, as they say, is history.

Fast Facts: Cupertino, California

County: Santa Clara
Population: 52,000
Average Climate: January—high 57, low 40; July—high 81, low 54
Distance from San Francisco: approximately 45 miles, or 45 minutes by car

ORIENTATION

Like any well-planned suburban sprawl, most of the action is located along two intersecting streets: DeAnza Boulevard and Stevens Creek Boulevard. Navigating this fair city is straightforward with the exception that South DeAnza Boulevard turns into North DeAnza Boulevard without warning, and of course, both North and South segments use the exact same street numbers.

The Cupertino Civic Center lies at the heart of the city.

Makes you wonder what's behind all those other garage doors.

2066 CRIST DRIVE
Where Steve Jobs and Stephen Wozniak got their start—in the Jobs family garage.

ELITE COMPUTERS & SOFTWARE
10591 North DeAnza Boulevard
Across the street from the Apple campus, Elite is the place to go during all those hours when the Apple Store is closed...like midnight. Elite has hosted two Midnight Madness sales events—once when the iMac first became available, the other for the release of Mac OS 9. Elite plans another midnight event for the release of Mac OS X, so pack your credit card and your No Doz.

The Apple campus used to be a *lot* smaller.

ORIGINAL APPLE HEADQUARTERS
10260 Bandley Drive
While rumors abound that the first Apple offices were on Stevens Creek Boulevard, all we can say for sure is starting in 1978 Apple made a building on Bandley Drive its home. Now the space is occupied by marchFIRST, a self-described "global professional services firm that creates winners in the new digital economy." Regardless of what that means, the office sure does have a nice pool table.

Come to the DeAnza College auditorium to see performances by the San Francisco Symphony, Al Green, David Copperfield, and Phil Schiller.

DEANZA COLLEGE'S FLINT CENTER AUDITORIUM
21250 Stevens Creek Boulevard
Apple has dropped a lot of bombs here. In this college auditorium, the company announced the Macintosh in 1984, the Power Macintosh in 1994, the iMac in 1998, and the iMac DV (with iMovie) in 1999.

If you look closely and are very quiet, you can see locals geeks grazing here.

SUSHI KUNI
10211 South DeAnza Boulevard
One former Apple employee hesitated to reveal information about this small Japanese restaurant to us, lest we let the secret out to the unbridled masses. Another one unabashedly described it as the "best damn sushi in the USofA." We wouldn't know. The restaurant is inconveniently closed during midday hours. To sample the hype, make sure you arrive on weekdays between11:30 a.m. and 2 p.m. for lunch, or between 5 p.m. and 10 p.m. for dinner. Closed for lunch on Saturday and all day Sunday.

THE PEPPERMILL RESTAURANT
10690 North DeAnza Boulevard
Step inside and you might think you've been transported to Vegas, the '70s, or both. Just swing left to enter the dark, cavernous bar, complete with sunken fireplace and red-sequined cocktail waitress. But despite its choice location at the corner of the Apple campus, you'll see few Apple employees here. As the story goes, when Steve Jobs banned smoking from its campus, employees brought their smokes to the Peppermill parking lot and allegedly left a lot of trash. Sources say that when the Peppermill complained, Apple's employees suddenly stopped frequenting the joint altogether.

APPLE COMPUTER
1 Infinite Loop
You've arrived...

You won't get much further than this without the proper credentials.

THE COMPANY STORE
by R&D 1 building
More than half the people who walk through the doors of the Apple Store are tourists, and they arrive by the busload. Once inside, you'll find a crisp, white, futuristic space with hardware, software, baby tees, tees for babies, pens, cups, and mouse pads, all temptingly displayed; but please pay for what you take. As one source told us, the store is hip to theft, especially those of the RAM and PowerBook battery variety.

Potential shoplifter or editor Cathy Lu? We shudder to ask.

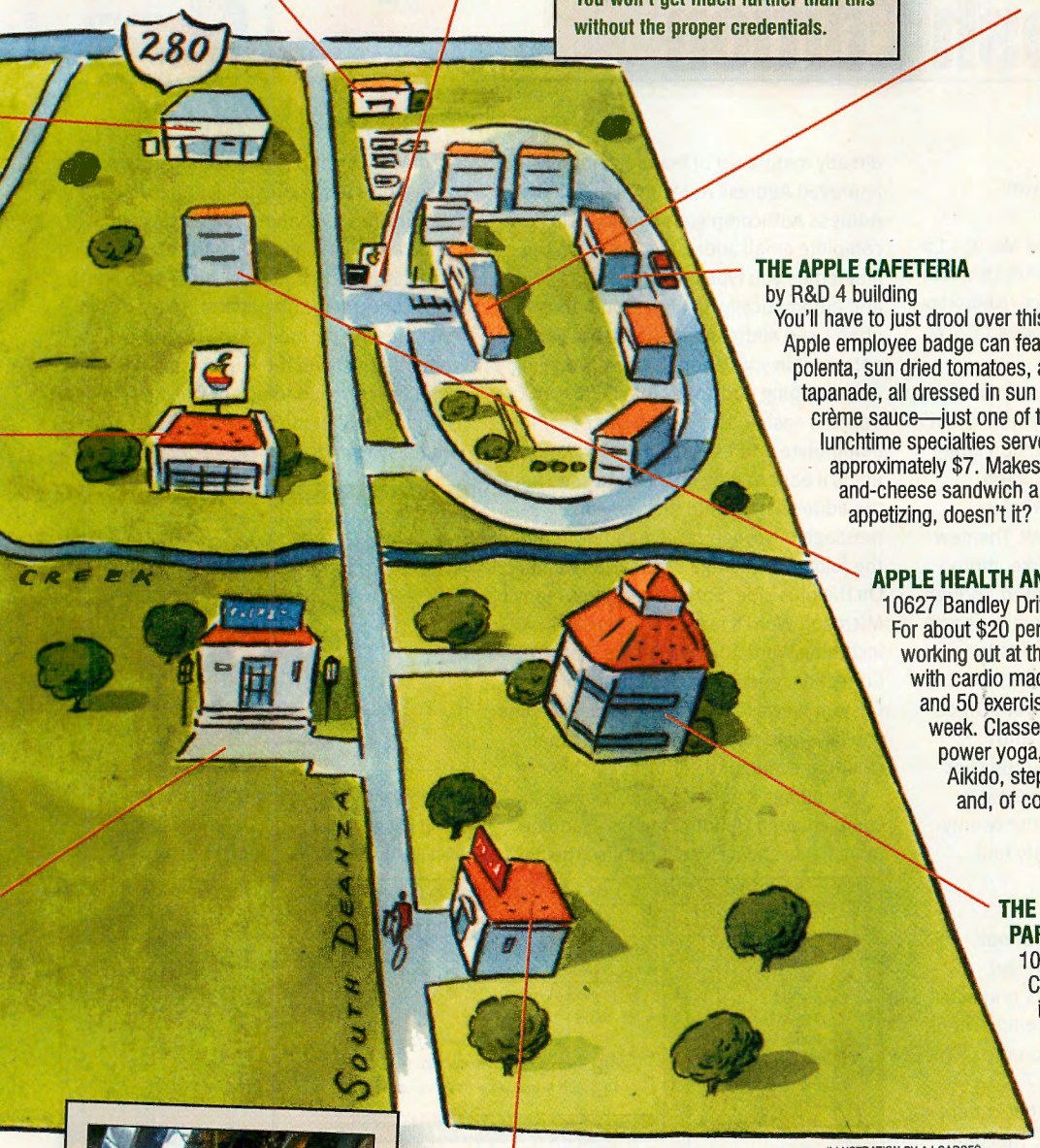

ILLUSTRATION BY AJ GARCES

THE APPLE CAFETERIA
by R&D 4 building
You'll have to just drool over this one. Only those wearing the coveted Apple employee badge can feast on Ling Cod wrapped around polenta, sun dried tomatoes, and olive tapanade, all dressed in sun dried tomato crème sauce—just one of the many lunchtime specialties served here for approximately $7. Makes your ham-and-cheese sandwich a little less appetizing, doesn't it?

APPLE HEALTH AND FITNESS
10627 Bandley Drive
For about $20 per month, Apple employees can enjoy working out at this 17,000-square-foot facility complete with cardio machines, weights, and 50 exercise classes per week. Classes include power yoga, spinning, Aikido, step aerobics—and, of course, iAbs.

THE CUPERTINO LIBRARY AND PARK AREA
10400 Torre Avenue
Could it be that Apple's design inspiration lies right here at the edge of the Cupertino Library?

Check out these prices! Only in the Valley.

MIYAKE
10650 South DeAnza Boulevard
Miyake is a traditional bustling Japanese restaurant complete with sushi floating around the bar on boats. Catering to its Silicon Valley corporate clientele, Miyake offers such specials as the Apple roll (tuna, crab stick, avocado, and cucumber), the Intel roll (unagi, yellow tail, fish roe, green onion, spice sprouts, wild carrot), and the Sun roll (salmon, unagi, kyuri, tobiko). A courteous staff quickly served us our lunch, which was pretty good. Our only bone to pick is that the Intel roll is clearly more appetizing than the Apple roll—revealing Miyake's platform bias.

Ordinary Port-A-Potty, or the original Bondi blue?

Narasu Rebbapragada is Reviews Editor at *MacAddict*. Oh, and if anyone's reading, she'd really like to check out that iAbs class at Apple Health and Fitness.

Office 2001 Macintosh Edition

Remove the Office 2001 disc and you've got a very geeky makeup case.

PHOTOGRAPH COURTESY OF MICROSOFT

FREAKIN' AWESOME! The most valuable products, the coolest gizmos.

SPIFFY A solid offering. Overall a good investment.

YEAH, WHATEVER Neither recommended nor rejected. Some might like this, but we weren't impressed.

BLECH! We want the time we spent testing this back.

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productivity

Company: Microsoft
Contact: 425-882-8080, www.microsoft.com
Price: $499 (SRP), $299 (upgrade)
Requirements: 120MHz PowerPC or faster, Mac OS 8.1 or later (OS 8.5 recommended), 48MB of RAM (32MB of RAM for pre–Mac OS 9) plus 1MB virtual memory, 160MB of free hard disk space (75MB for minimum installation), CD-ROM

Microsoft has finally seen the light. An ever-increasing feature bloat, making each new version larger and more cumbersome, has afflicted Office's Word, Excel, and PowerPoint applications for years—until now. The new Office 2001 suite is more Mac-like, more user-friendly, and better integrated, though it still includes its share of superfluous and hidden features. For new users, it's the most comprehensive package of its kind. If you're considering an upgrade from Office 98, you'll find that Word, Excel, and PowerPoint offer just cause, and the slick new Entourage 2001 provides the most compelling reason to leap into the twenty-first century with this productivity tool.

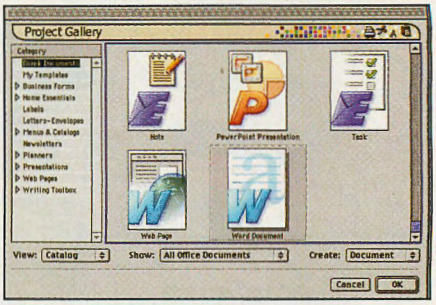
Entourage 2001

Entourage 2001 is essentially Outlook Express on steroids. This brand-new member of the Office suite looks and acts almost exactly like the popular email client, but it's fortified with a full personal information manager (PIM).

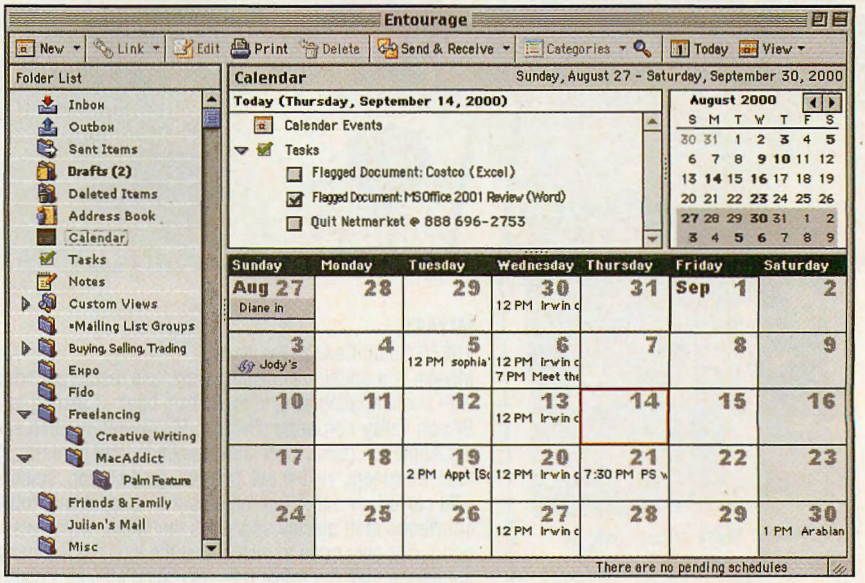
Switching to Entourage from our current email client and PIM was a snap. The Setup Assistant smoothly imported our thousand-plus Palm Desktop contacts, notes, to-do's, and calendar events. It also imported our massive email database from Outlook Express without a hiccup. If you're not an Outlook Express or Palm Desktop user, Entourage can import from other PIMs such as Now Up-to-Date and major email clients such as Eudora and Claris Emailer.

Entourage's email client adds some minor refinements to Outlook Express's already mature set of features, notably an improved Address Autocomplete feature. Address Autocomplete offers to fill in complete email addresses based on the first letters you type into an address field, and automatically highlights your most-often-used address whether or not you've entered it in your address book. Dragging and dropping addresses into CC and BCC boxes is easier, but you still can't manipulate addresses in a group window, nor is it easy to drag email addresses from the address book into the body of a message. Also, you can't manually reorder the folders Entourage uses to store email. On the plus side, Entourage shares many of Microsoft Word's text-editing features, including Word 2001's Spelling, Auto-Correction, and Smart Selection. The new Custom Views feature in the Folder List lets you save and apply sophisticated email, calendar event, and contact searches.

Entourage's Address Book is more complete than Outlook Express's, adding more fields and a cleaner display. The links to driving directions and online maps are also a nice touch. The full-featured calendar module has everything you'd expect from a good datebook, and it can create a slick Web page of your schedule (for those who are less concerned with privacy). You can seamlessly synchronize the to-do's (which have alarms) and the Palm-inspired notepad with the corresponding apps on any Palm OS handheld. (Wouldn't it be nice if Entourage could synchronize email, too?) Entourage's



The well-meaning Project Gallery can guide you along the path to a perfectly formatted Office document. You can also turn it off.



Entourage uses Outlook Express's familiar interface to create a calendar that could organize anyone.

contacts, calendar, and alarms integrate nicely not only with its email client—drag an email right onto a calendar date to create an appointment for it—but also with other Office apps, forming the suite's central hub.

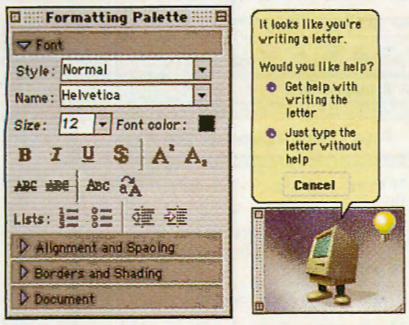
Entourage is not only a welcome new component of Office 2001, it's one of the most useful new applications to arrive on the Mac platform in recent memory. Entourage alone offers sufficient reason for upgrading from Office 98.

Microsoft Word 2001

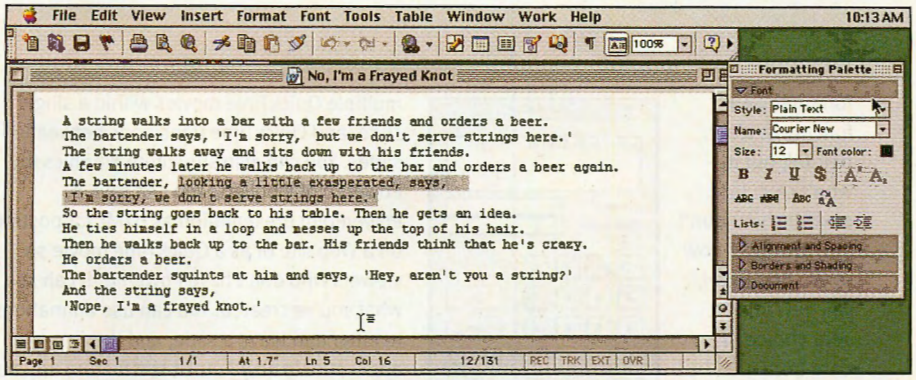
Less buggy and more user-friendly, Word 2001 sports interesting new features while retaining Word 98's good qualities.

Word 2001 is comfortingly familiar. It launches quickly, and once you get past the blue splash panel and optional Project Gallery dialog screen, you'll find the menu items and command keys nearly identical to those in the previous version. Word 2001 is even more Mac-like, adopting Apple's recent Navigation Services addition (visible in the new Open and Save dialog boxes) and the Macintosh Appearance Manager (so that utilities like Kaleidoscope now work). We suspect the adherence to Macintosh technologies may be responsible for some little improvements. Double-clicking to select a word is less finicky; you can move the Find And Replace dialog box behind the active window; and finally, Microsoft has kindly moved Preferences back to its proper location in the Edit menu.

The most visible, and perhaps the most useful, change is the new floating Formatting palette. This holds more information than the former Formatting toolbar while taking up less space than the Format menu's dialog boxes.



The brand-new, compact, and extremely useful Formatting Palette disappears at the click of a button. The ever-present Assistant, on the other hand, exhibits none of these qualities.



We've all heard the string joke, but now Word's status bar tells us how many words this yarn contains.

We also like the app's new ability to wrap text around a table placed anywhere on the page. Plus, Word's clever new Collect And Paste feature lets you gather multiple pieces of text and graphics from various Office application files to paste individually or all at once from a single clipboard.

Microsoft has addressed some of Word 98's more annoying drawbacks. Word 2001 documents are now transparently interchangeable with Word 97, 98, and 2000 for Windows, and they can also open AppleWorks 5 (version 5 only) word processing files. The simplified Mail Merge, renamed Data Merge, draws contact data from Entourage in the same way Word 98 used Outlook Express, and it's easily configured from a well-designed palette. Word 2001 also offers more-compact toolbars, and attaches the status bar to the bottom of each page window, not to the bottom of the screen. A real boon for writers tired of repeatedly heading for the Tools menu, this status bar displays a continually updated word count. One of the most subtle but satisfying improvements is that Word no longer litters the hard drive with dozens of files titled Word Work File D_3174. Word's temporary files are now hidden in an invisible folder. Moreover, during our testing, Word 2001 never once hit us with the nasty "disk full" bug that plagued Word 98.

Word 2001 continues improvements that Word 98 only began. While we crave even more refinements, Word 2001 retains its status as the world's most powerful word processor, while achieving its goal of becoming more functional, easier to use, and nicer to look at.

Microsoft Excel 2001

Microsoft Excel remains the powerful and complete spreadsheet application we've come to know and, uh, tolerate.

Microsoft adds to Excel several innovations not usually associated with spreadsheets; perhaps the most surprising is the List Manager. Microsoft says it added this feature to aid the huge numbers of users who use Excel simply to create static lists. Excel's List Manager notices when you're creating a simple list and offers to format your data from predesigned templates, add or delete columns, total your figures, create reports, and so on. Similarly, a new Calculator, accessed by clicking the Calculator icon in the Formula bar, can help novices learn to create

Pricing: Stand-Alone or with an Entourage

Microsoft is charging beaucoup bucks for Office apps, so should you buy the whole Office 2001 suite or just the apps you need? Brand-new, Office 2001 costs just $100 more than buying individual apps (Word, Excel, or PowerPoint) for $399 each. If you're upgrading, the $299 upgrade price holds whether you're upgrading from just one Office 98 app or from the whole 98 suite. While you can upgrade an individual app for $149, you won't get Entourage (not sold separately). So unless you're a one-app user ambivalent about Entourage, you're better off getting the whole shebang.

in review

audio
MIXMAN DJ MEGAMIX p76

that's infotainment
THE COMPLETE MP3 PACKAGE p78
COMICBASE DELUXE 5.0 p78
GROLIER MULTIMEDIA ENCYCLOPEDIA 2001 p78

hardware
I-JAM PORTABLE MP3 & AUDIO CD PLAYER p65
PHOTOSMART C618 p68
NOMAD JUKEBOX p70
QUE! FIRE DRIVE p73
POWERFILE C200 p72
SANCUBE p76

fun & games
ASTEROIDS p71

kidz stuff
I SPY JUNIOR PUPPET PLAYHOUSE p80
MIA2: ROMAINE'S NEW HAT p80
PAJAMA SAM 3 p80

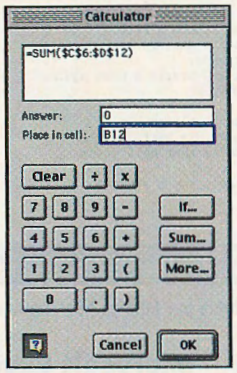
multimedia
CANON VIDEO HOME EDITION p74

productivity
OFFICE 2001 MAC EDITION p58
QUICKEN 2001 DELUXE p62

utilities
QUICKKEYS 5.0 p75

design & graphics
FLASH 5.0 p66
CANON PHOTO ADVANCED EDITION p64

formulas and functions. It's helpful, but it won't calculate anything you don't already know how to do. And Excel will now import your choice of data from a FileMaker Pro database via the Get External Data command in the Data menu. Just choose the Import From FileMaker Pro option and work through the FileMaker Import wizard.



Excel's new calculator helps novices create mathematical formulas and functions.

Like Word files, Excel files are transparently interchangeable with Windows and earlier Mac versions. And Excel, like Entourage, has picked up a couple features from Microsoft Word, adopting its Tables and Borders tools along with its keyboard shortcuts. To make text bold, you now use the standard Command-B keystroke. You'll love this change if you're a casual Excel user and hate it if you're used to Excel 98. The same goes for Excel 2001's removal of Command-I (to insert cells) and Command-K (to delete). The new List AutoFill feature can extend formatting and formulas into cells. And if you put your spreadsheets on the Web, Excel now converts them into HTML in a snap, either on demand or on a set schedule.

The changes to Excel aren't earth-shaking, but both veteran and new users will find something they like.

PowerPoint 2001

Of all the Office applications, PowerPoint appeals to the narrowest audience. Still, Microsoft has beefed up this presentation software package to address some of its users' most common criticisms. First, it's a lot easier to create and navigate through a presentation. PowerPoint 2001's Tri-Pane view simultaneously displays in a single, split window a presentation slide, the outline that organizes the slides, and your notes. Addressing a long-standing complaint, PowerPoint now lets users employ multiple templates to structure one presentation by applying templates independently to any slide.

PowerPoint now offers improved graphics capabilities—supporting animated GIFs, multiple QuickTime movies within a single slide, and QuickTime transitions between slides. You can also substitute graphics for PowerPoint's bullets. You can save a PowerPoint presentation as HTML for posting on a Web site or as a QuickTime movie so viewers who don't have PowerPoint can see what you've created. You can use animations to enter and leave a slide, and the application's new AutoFit text feature adjusts font size and line spacing to fit text into a box. Importing a feature from Word, PowerPoint will now apply Bullets And Numbering to lists.

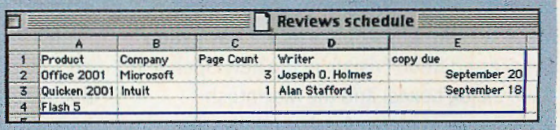
While the application certainly doesn't have the huge number of followers boasted by, say, Excel and Word, die-hard PowerPoint users will appreciate the introduction of improvements for which they've long clamored.
—Joseph O. Holmes

good news: More Mac-like. Integrated applications. Some operations are easier to use.
bad news: No printed (or even PDF) manuals. Minor annoyances persist. Some operations are still too complicated.

Integrating Our Office

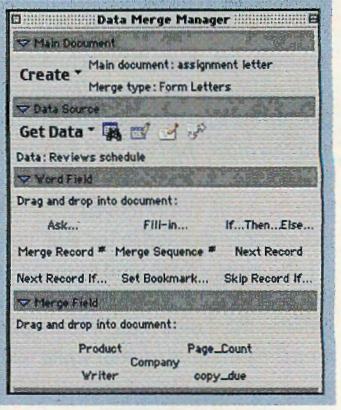
Used together, the Office 2001 apps can better organize even the best-run ship.

Step 1 Excel's List Manager helped us create a list of the stories running in this month's *Reviews* section.

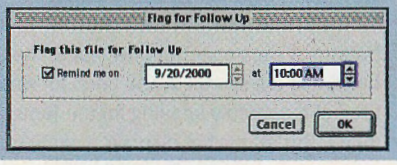


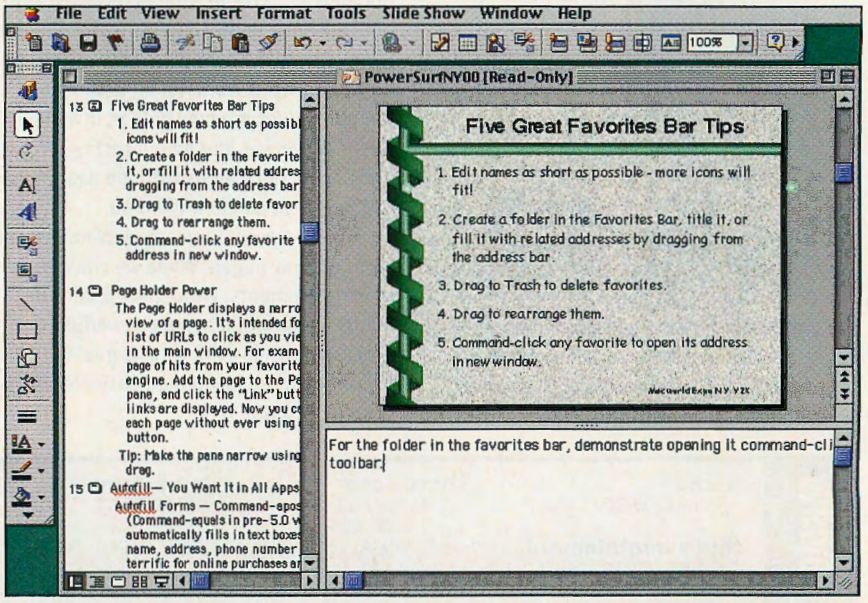
	A	B	C	D	E
1	Product	Company	Page Count	Writer	copy due
2	Office 2001	Microsoft	3	Joseph O. Holmes	September 20
3	Quicken 2001	Intuit	1	Alan Stafford	September 18
4	Flash 5				

Step 2 We used Word's well-designed Data Merge Manager to create an assignment letter with the deadline date for every writer on our list.



Step 3 Using the Flag For Follow Up command, we scheduled Entourage to remind us to contact the writer on the deadline date.





PowerPoint's Tri-Pane view lets you see outline, slide, and note views all at the same time—for life's important presentations.

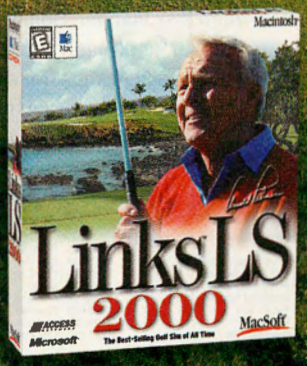
Buy 2 Get $10

back by mail when you buy any two games from a hit list of 15 MacSoft titles. Complete details on page 21

Real courses. Real physics. Real ball control.

Fuzzy Zoeller joins Arnold Palmer and three other new golfers

Featuring St Andrews Old Course, plus five new courses



You'll feel like Links LS 2000 is the perfect reflection of your real golf game. And with six new courses (including the spectacular St Andrews Old Course), 35 modes-of-play, and "constructive criticism" from cutup golf announcer David Feherty, you've got plenty of opportunity to improve. Watch out for the rough!

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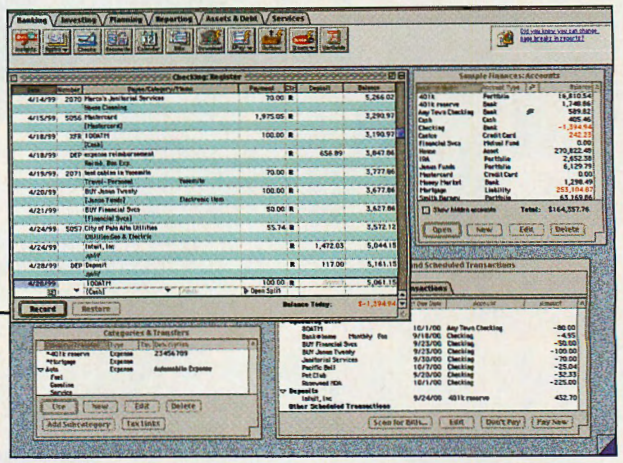
Quicken 2001 Deluxe

productivity

Company: Intuit
Contact: 800-446-8848 or 650-944-6000, www.intuit.com
Price: $59.95, $39.95 upgrade (via rebate)
Requirements: PowerPC, Mac OS 8.6 or later, 32MB of RAM, 60MB of free hard disk space, 2X or faster CD-ROM, 800 by 600 256-color monitor, 14.4-kbps modem for Internet access



In Quicken 2001 Deluxe, the interface hasn't changed much, except for some platinum windows.

With Quicken 2001 Deluxe, Intuit doesn't drive personal finance to new heights. The upgrade adds almost nothing to justify its price. Rather, the company has honed the application as a marketing vehicle for the Quicken.com Web site.

For keeping track of your finances, Quicken excels and earns a *Spiffy* from us. The application's been around as long as the Mac, and Intuit has crafted it into an incredibly useful piece of software. If you want your checking account to balance month after month, you need Quicken.

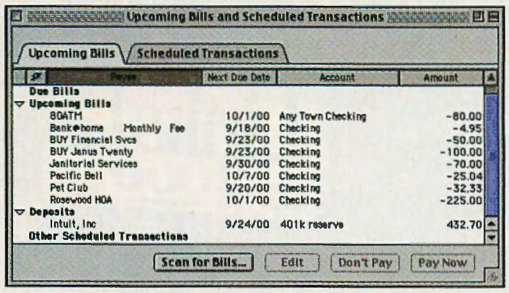
Quicken 2001 includes several new links to online financial services located on the Quicken.com site, as well as to Intuit's subsidiary and partner sites. Services include a 401K advisor, College Planner, Auto Risk Planner, Home Affordability Planner, and Family Needs Planner. The latter is a worksheet for determining how much life insurance you need. We're guessing a menu item dubbed How To Choose And Buy Life Insurance wouldn't get nearly as many clicks.

All of the Web services provide basic services free, but they try to convince you to pay for premium services. For example, you can use an online form in the "personalized" 401K advisor to determine how much you'll need to save for retirement, but for $50 you can talk to a human. Intuit gets a cut, too: For the 401K advisor, Intuit receives 25 percent of any fees you pay for premium services. Perhaps worse, Intuit shares your personal information with its partners—and Intuit's privacy policy doesn't bind them. Still interested? You don't even need Quicken 2001 to gain access; anyone can get to these sites from Quicken.com.

Quicken 2001's BillMinder has long made a habit of alerting users to upcoming scheduled transactions, but now the application can scan for regular transactions, ascertain how often (and how early) you pay them, and warn you of upcoming bills. More than 1,000 financial institutions allow you to download transactions and pay bills from within Quicken. If yours doesn't, Intuit subsidiary CheckFree offers bill paying services for another $9.95 (base fee).

Intuit has at last updated many of the windows displayed in Quicken 2001 with Apple's platinum look, but they could use some consolidation. Quicken still uses a host of simple windows with limited information to convey all its data, resulting in substantial screen clutter.

Intuit doesn't provide free live technical support—you must pay $1.95 a minute for all but the most basic problems (product bugs, installation, and data conversion). Starting with Quicken 2000, you don't get a paper manual (information is contained only on CD). Still, for new users, nothing beats Quicken's ability to track finances, but unless you really have a hard time remembering when bills are due, don't bother.—*Alan Stafford*



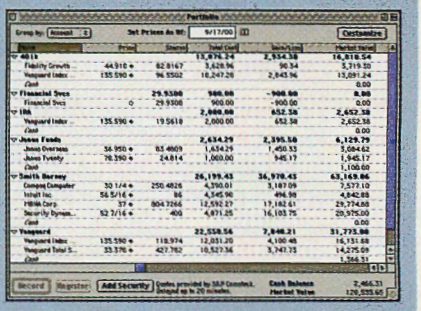
Now you have no excuses. Quicken lines up all your upcoming transactions and displays multiple BillMinder warnings to remind you when the rent's due.

You have bills or other scheduled transactions due or overdue. Please review your bills in the Upcoming Bills and Scheduled Transactions window.

good news: Useful portfolio uploading. Better warnings for upcoming bills.
bad news: Toolbar buttons double as come-ons for Quicken.com partners. Live tech support will cost you. Interface needs consolidation.

Quicken.com

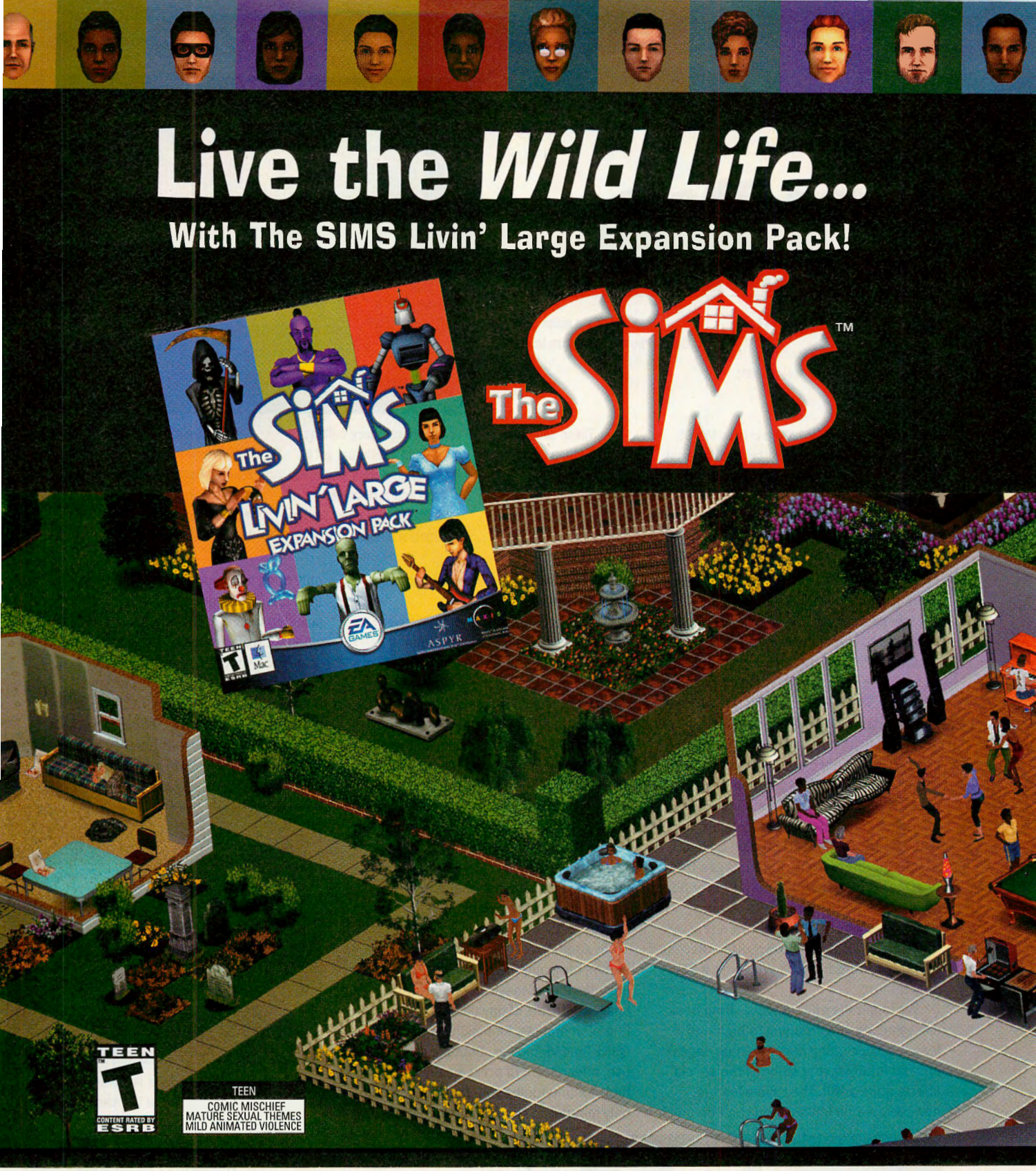
Quicken 2001 lets you upload investment data, including transactions, to Quicken.com. Enter the names, symbols, quantity, and price you paid for the shares in Quicken software, upload everything to Quicken.com, and monitor the stocks' performance in either the app or the site. The data transfer is only one-way, though—you can upload information to the Web site, but not vice versa. Quicken.com offers much more comprehensive and timely investment research displayed in more attractive, useful formats.



Export your investment portfolio to Quicken.com so you can monitor it from anywhere.

Live the *Wild Life...*

With The SIMS Livin' Large Expansion Pack!



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Canon Photo Advanced Edition

design & graphics

Company: Canon Software Publishing
Contact: 800-652-2666 or 714-438-3000, www.software.canon.com
Price: $39.95 (SRP)
Requirements: Power Mac 120MHz or faster, Mac OS 8.6 or later, 64MB of RAM, 200MB of free hard disk space, 4X CD-ROM, 28-Kbps modem for Internet access

Here's a quick guide to CanonPhoto's menuless interface.

These category buttons guide you through the import, edit, and export processes.

These category buttons pull up a different set of options. Here's where you can add text, paint, borders, and other snazzy special effects.

This toolbar contains basic rotate, scale, and reflect tools. When you zoom in beyond the scope of the main window, a handy viewfinder lets you navigate to the different sections of your image.

In the domain of photo editing, Adobe Photoshop is the undisputed king of the ring, but it carries a huge price tag. Even Photoshop's light version costs about $100. Canon's new Photo Advanced Edition is a low-cost alternative—expressly aimed at the photo-editing neophyte.

Canon Photo's most striking feature is its interface—think Aqua meets Windows by way of *Star Trek*. You won't find any familiar Mac windows or menus—the program fills the screen, with images appearing in a fixed-size window at the center. It took us a few minutes to get used to this interface, but it's friendlier to beginners than Photoshop's nested palettes, file menus, and dialog boxes.

Canon Photo let us load images from our hard drive, digital cameras, scanners, even DV cameras. We set up our own searchable photo albums with a few quick clicks. Unfortunately, direct access to photos stored on the Web was a PC-only feature.

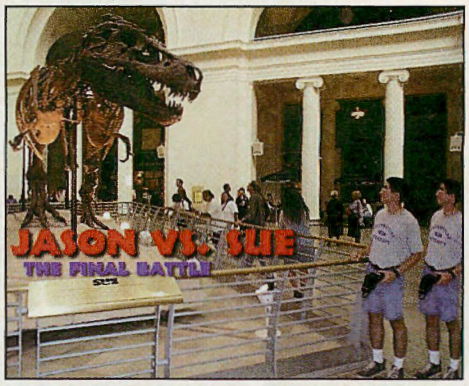
We found the editing tools—from basics like selecting and cropping to high-end features like cloning and softening edges—fun and intuitive, and some of the special effects quite artful. The Layers feature, however, is a bit limited. You can't do much to layers besides hide them and change their opacity with sliders.

Once we edited our photos, we went to the Projects category to place them in calendars, greeting cards, and a variety of custom borders. Clicking an outdated floppy disk icon in the Save category let us save files in JPEG, PICT, BMP, or Canon proprietary file formats. We loved the paper-saving Print Photo feature, which fits several different-size photo prints on one page. One of our favorite features is the accompanying PhotoFantasies program. We had way too much fun putting our friends and family's faces onto the bodies of rock stars, athletes, and astronauts. Parents should know that a few of the body cutouts are suggestive.

In addition to a bare-bones video-editing program, the Advanced Edition also includes PhotoMosaic, for re-creating large images with lots of tiny tiled pictures, and PhotoPanoramas, for making your own QuickTime VR movies. Both are simple to use, offer decent (if occasionally buggy) tools for fine-tuning your images, and take only minutes to create impressive results. (A basic edition without the video, mosaic, or panorama programs costs $29.95.)

But as you might expect from a $40 photo app, Canon Photo's basic editing and whimsical special effects come with a fair number of limitations. We could only open two images simultaneously, and the blinking marquee surrounding a selected image confused us, especially when we were cropping. The rotate and scale tools modified the image but not the background, leaving large white gaps between the two. Filling in these gaps with your choice of color is a cumbersome process. Finally, the paintbrushes react very slowly. Move the mouse too fast, and you'll have to wait for your brush to catch up.

Making your own panoramas has never been so easy.



Layers, cloning, and text tools let us turn a single person into twins and a day at the museum into an epic confrontation.

Canon Photo is not a Photoshop killer or even a minor threat. But for basic photo cleanup with a few frills, its feature set and low price make it an acceptable value.—*Nathan Alderman*

good news: Powerful features. Easy to use. Great price.
bad news: Unusual interface. A few odd bugs.
spiffy

I-Jam Portable MP3 & Audio CD Player

PHOTOGRAPH BY AARON LAUER

Jamming on your I-Jam is a little difficult, considering that the player doesn't totally work.

hardware

Company: I-Jam
Contact: 888-326-4526 or 847-839-1233, www.ijamworld.com
Price: $149 (SRP), $129 (street)
Requirements: None

Think of I-Jam as the Yugo of the electronics world: Its products are temptingly cheap, but you get what you pay for. Technically, I-Jam's Portable MP3 & Audio CD Player works, but enough problems arose to suggest that we had a lemon on our hands.

The I-Jam player handles both standard audio and MP3 CDs, which sound quite nice, even though customization is limited to two bass settings. That, unfortunately, is where the good news ends. I-Jam suggests that you catalog music files into directories before burning them to CD, since the player has trouble recognizing more than 50 songs in one folder. When we did that, the I-Jam often played just the first song in each directory before shutting down. I-Jam tech support suggested that we upgrade to Toast 4.1 and format our disc as ISO 9660—still no go. In fact, burning all our chosen songs at the CD's root level produced the only reliable results. Also, the player doesn't recognize renamed tracks, and all the buttons don't work as they should.

I-Jam's tech support staff provided little help—for the most part, they either couldn't answer our questions or reiterated material in the manual. Speaking of the manual, ours was written in a language barely resembling English; a more grammatically correct version should now be shipping.

The player comes with an adapter (since two AA batteries supply about only two hours of power) and two sets of headphones—a nice touch, although we would prefer a product that worked decently.—*Cathy Lu*

good news: Among the first of its kind. Reasonably priced.
bad news: Buggy. Tech support sucks. Can't handle directories as promised.

yeah, whatever

Flash 5.0

design & graphics

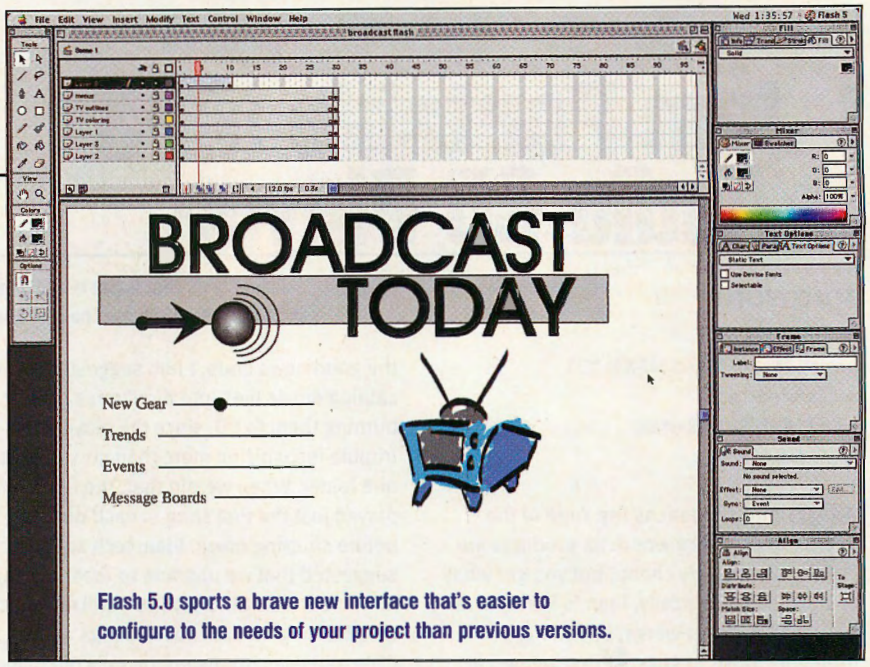
Company: Macromedia
Contact: 800-457-1774 or 415-252-2000, www.macromedia.com
Price: $399 (SRP)
Requirements: PowerPC, Mac OS 8.1 or later, 32MB of RAM, 48MB of free hard disk space, CD-ROM, color monitor

Find a Flash 5 trial on The Disc.

Flash is recognized as the leader in Web-based interactive animation, giving Web designers powerful scripting and interactive tools to create impressive animation at small file sizes. The latest release, Flash 5.0, sports enough new features and improvements to maintain that position. A revamped interface and improved tools are just a few good reasons to invest in Flash 5.0.

At $399, Flash 5.0 is not priced for the hobbyist, despite the minimal system requirements. It's no surprise that intallation was seamless on our professional graphics systems: a dual 450MHz G4 with 640MB of RAM and an upgraded 400MHz G3 with 320MB of RAM running Mac OS 9.

The first difference experienced Flash users will notice is the program's changed interface, which Macromedia has updated to its Common User Interface—common only to Macromedia applications. Most Mac conventions and expected keyboard shortcuts are incorporated, and Flash selects, copies, and pastes objects to and from other applications. We had no trouble dragging and dropping or copying and pasting objects from either Photoshop 5.5 or Illustrator. However, Illustrator 9 objects didn't retain their transparency values, and became opaque in Flash.



Flash 5.0 sports a brave new interface that's easier to configure to the needs of your project than previous versions.

As part of the interface update, almost every feature and command is accessible through docking Panels, which you can group together to save screen real estate. Panels work similarly to Adobe's palettes, so much so that Adobe filed a lawsuit against Macromedia. While grouped Panels save space, individually laid-out panels are a real asset for users with higher resolution monitors or dual monitors. Once you find a Panel layout you like, with often-used tools close at hand, you can save and recall layout presets for animation, text-based work, menu and navigation design, and other kinds of work. This user-friendly interface, along with context-sensitive tool tips and Flash's HTML-based tutorials, makes the learning curve far less daunting for new users. This help system also includes complete documentation and reference files for ActionScript, Flash's built-in scripting language.

On a deeper level, Macromedia listened to developers and improved several features—including the pen tool, which now draws much like Macromedia FreeHand or Adobe Illustrator bézier drawing tools. This simple improvement is an important one—vector graphics and bézier drawing tools go hand-in-hand. Additionally, the brush tool now works well with a Wacom Intuos tablet, detecting pressure changes and changing line width accordingly. However, using the eraser on the Intuos pen erases all layers, not just the selected layer. The Eraser from the Flash toolbox behaves the same way. The only way to erase a single, specific layer is to turn off (hide) or lock layers you don't want to alter.

Developers will be both pleased and disappointed in Flash's new ability to share object libraries. Objects are the basic building blocks of Flash, and an object library is a warehouse of text, shapes, logos, and other elements placed in a Flash movie. Sharing object libraries means that you can create one library from which many simultaneously downloaded Flash movies can share data. The net result here is a one-time download full of reusable material,

Flash vs. LiveMotion

While the ongoing competition between Macromedia and Adobe resembles *Clash of The Titans*, the truth is that Flash 5.0 and its closest competitor, Adobe LiveMotion, have different feature sets that appeal to different audiences. Both applications output standard Flash .swf files, but their approaches to interactive Web graphics differ. For those familiar with Macromedia's tools, Flash is the way to go.

But if you've never laid hands on a Macromedia product, LiveMotion may be a better choice. Modeled after Adobe's popular motion graphics program, After Effects, LiveMotion is geared toward creating animation. By virtue of LiveMotion's simpler interface, new users creating their first advertising banner might find it easier to understand the timeline, key frames, and layers in LiveMotion than in Flash.

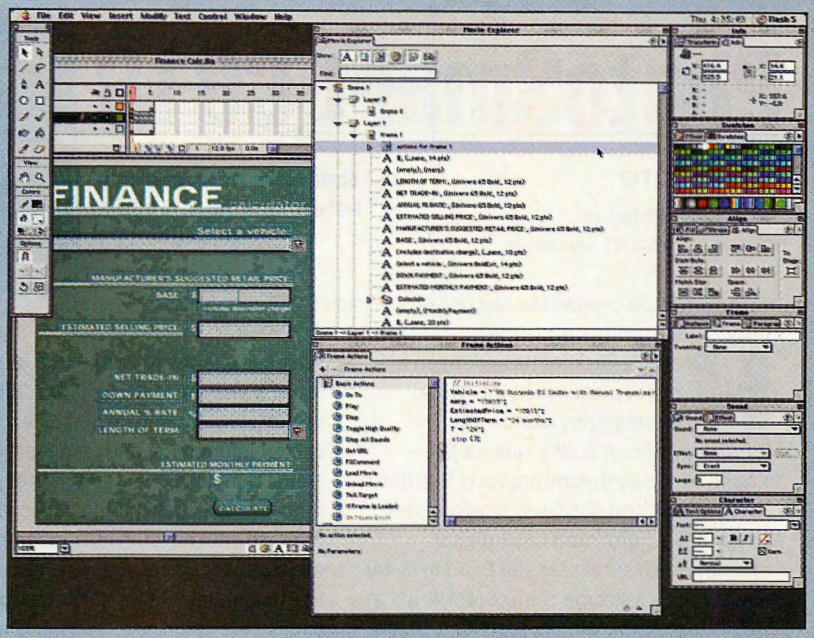
However, if your needs extend beyond animation, or if you must build something more interactive than a rollover menu, Flash is the way to go. More than a tool for creating animation, it offers a powerful scripting language absent (for now) from LiveMotion, as well as tools like shared libraries and the Movie Explorer for providing overviews of projects and global editing capabilities.

Movie Explorer

There is nothing simple about a large, interactive project. Sorting all the elements in your head can be impossible, and the challenge makes you wish for a surgically implanted memory socket. Until that technology arrives though, Flash 5 has the Movie Explorer. This panel displays an entire Flash movie as a navigable hierarchical list of text objects, which you can edit. The Movie Explorer will quickly become your best friend, once you learn to toggle from an all-graphics mode to an all-text mode.

By default, the Movie Explorer Panel comes up attached to the Frame Actions Panel in a single window. The power user will want to tear apart these Panels and keep them both visible in separate windows. The advantage here is that when selecting an object (such as actions) in the Movie Explorer window, its properties show up in the Frame Action window, where you can edit them.

You can also use Movie Explorer to select multiple text objects and to change text properties for all selected items—great for those times when the client says, "We love everything about it, except for this one little thing..."



The new Movie Explorer offers a global view of all the elements within a project. You can select, search, display properties, and, in some cases, edit objects.

and very small Flash movie sizes. Unfortunately, we discovered that only one designer at a time can open a shared library. When a second user attempted to open a library already in use, an Unable To Open: File In Use dialog box stopped us.

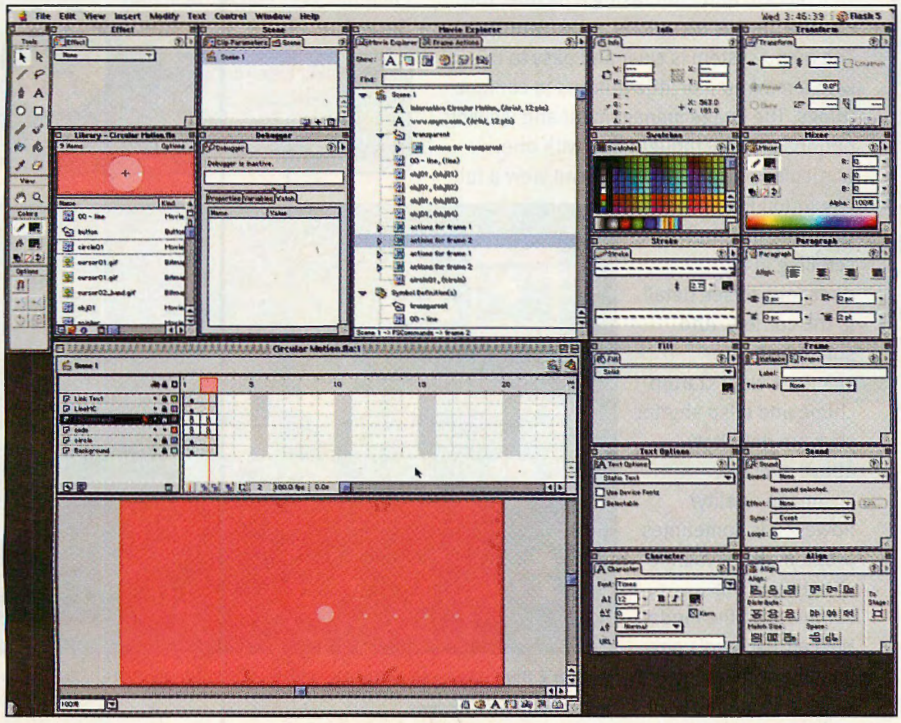
To the end user surfing the Web, Flash's greatest strength is graphic quality and quick download speed. To the Flash designer behind the wheel, however, the really cool stuff is under the hood, and the changes here are more than just superficial improvements. ActionScript, the heart of Flash's functionality, has been retooled and enhanced. ActionScript now closely resembles the JavaScript programming language. If you are familiar with coding in JavaScript, you should feel at home using ActionScript, although both languages have some features that the other doesn't support. Unlike JavaScript, ActionScript doesn't support browser-specific objects such as Document or Window. This discrepancy stems from an effort to remain browser-independent.

This level of coding is exciting to any hardcore Flash developer, allowing for greater freedom, control, and complexity than was previously possible. New users, though, shouldn't feel intimidated. Flash is still easy to use, and you can do a lot without digging too deep into its scripting features.

Other new features include new color palettes and management, improved selection tools, the Movie Explorer (see "Movie Explorer," above), and custom shortcut keys, making Flash 5 a solid upgrade. Existing Flash users should upgrade, and for new users serious about creating interactive Web content, now's a great time to start using Flash.

—Mike Caputo

good news: Customizable interface. Improved drawing tools. Shared libraries. MP3 support. Improved ActionScript. Movie Explorer.
bad news: Shared object libraries accessible to only one user at a time.



More palettes than you can shake a cursor at—Flash 5.0 is a good excuse to go out and buy a large monitor. Luckily, you can save and recall layouts at will. This one is called Info Overload.

PhotoSmart C618

PHOTOGRAPH BY AARON LAUER

hardware

Company: Hewlett-Packard
Contact: 888-999-4747, www.hp.com
Price: $599 (SRP)
Requirements: USB-connected Mac, Mac OS 8.6 or later (Mac OS 9.0.4 recommended)

Sharp design and user-friendly features make the C618 a solid offering from HP.

Hewlett-Packard has not been a major presence in the digital photography world—not surprising, since it built a camera line around seriously dumpy products like the PhotoSmart C500 (*Reviews*, Sep/00, p60). So the new PhotoSmart C618 digital camera, which surpasses the C500 in every way, marks a welcome change for HP. It's a pretty classy cam, with its functional black-and-silver skin, easy-to-use controls, and useful features.

We shot this image in direct sun using the C618's Action (sports) mode, a center-weighted focus, Better JPEG compression, and a full-size (1600 by 1200) image. Note the overexposure, washed-out colors, and graininess imparted by the compression level.

Like most digicams in this range, the PhotoSmart C618 is a versatile piece of hardware. It contains a 2.1-megapixel CCD with a glass-element Pentax lens and 3x optical zoom. Shooting modes include aperture priority and shutter priority; three metering modes for portrait, landscape, and sports; macro/close-up; time lapse; and a continuous shooting option. The 2-inch LCD screen is sharp and clear, but a bit too dark for easy viewing in daylight conditions. The optical viewfinder displays LED exposure control information and features a diopter adjustment wheel (it's so tiny that you probably can't use it if you've recently trimmed your nails). A microphone records up to 45 seconds of sound, which you can use to annotate images. Wireless printing and cam-to-cam image transfer is available via the JetSend infrared port (standard on most HP imaging products). The camera also ships with a 16MB compact flash card, four AA LiIon batteries, a USB cable, a shoulder strap, and a printed manual. Bundled software includes Hewlett-Packard's photo imaging software, as well as ArcSoft's PhotoImpression 2000 and PhotoMontage 2000.

The C618 performs well in a fast-shooting situation—it's light, well balanced, and comfortable to hold. The controls are well placed, and after taking a picture, the camera powers up quickly to take another. The menu system is clear and easy to use, with a minimum of little buttons to confuse things. The image management and viewing options are well thought out, with one particularly nice feature: You can view a full-resolution image in the LCD, zooming and scrolling in all directions to see detail in the corners. And soundwise, the camera's clear startup chime and crisp shutter click are definitely above average.

Image quality, however, is sometimes problematic. If you are shooting in the compressed file mode, Hewlett-Packard's new imaging technology kicks in to stabilize color contrast and lighting. The in-camera enhancement works fine in low-light situations, but in a brighter environment, the photos we shot in Better JPEG mode emerged grainy and washed out, with excessive color correction in shadowy areas. To remedy this problem, we recommend taking pictures in the uncompressed TIF mode—these full-size uncompressed images aren't as grainy, but only 30 to 40 images fit on the included 16MB Compact Flash card. Still, the uncompressed TIFs we snapped seemed pale compared to images from other cams we've tested in the same mode. And in a market full of 3.3- and 4.2-megapixel models, any 2.1-megapixel camera will have a hard time competing on image quality.

With the C618, Hewlett-Packard establishes its credibility, offering a combination of style and functionality. It should serve well as the model for future HP cameras.—*Miriam Anzovin and Steve Anzovin*

good news: Classy design. Clear controls. Good optics.
bad news: Low resolution for a new camera. Average image quality.

ArcSoft's PhotoMontage software, which ships with the C618, can help you catalog your images.

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back by mail when you buy any two games from a hit list of 15 MacSoft titles. Complete details on page 21

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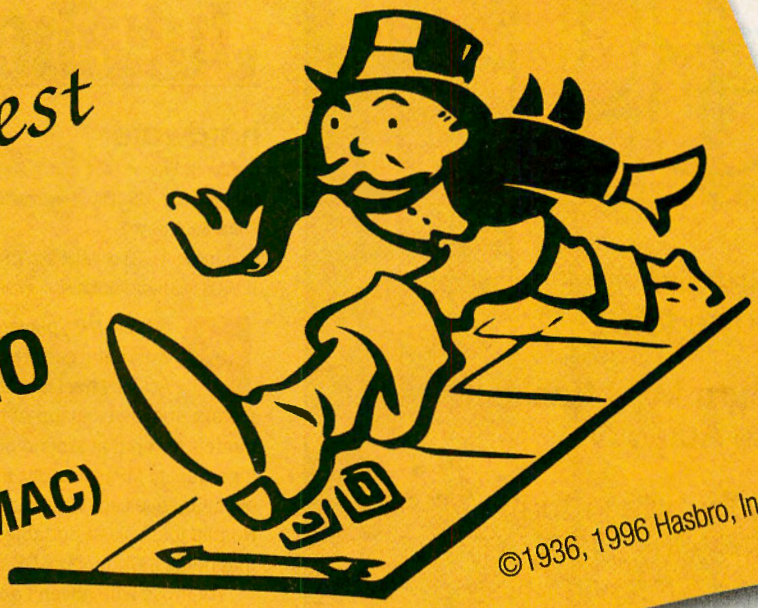

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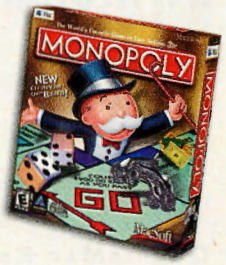

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Nomad Jukebox

PHOTOGRAPH BY AARON LAUER

The Nomad Jukebox holds about 150 times more than your average CD player.

hardware

Company: Creative Labs
Contact: 800-998-1000, www.creative.com
Price: $499 (street)
Requirements: G3 or faster, Mac OS 8.6 or later, 32MB of RAM (64MB recommended), 12MB of free hard disk space, one free USB port, USB Manager 1.2 or later.

Portable MP3 players are wonderful gadgets, but their Achilles heel has always been storage space—even top-of-the-line models max out at around 90 minutes of high-quality MP3s. Luckily, those days are over. Creative Labs has unleashed the Nomad Jukebox—a portable MP3 player that holds a whopping 6GB of music.

For those who haven't done the math, 6GB equals roughly 100 hours of music or 150 average-length albums. And all this storage requires little physical space. The Jukebox is comparable in size to an average portable CD player, and generally nicer looking.

The Jukebox has a few quirks though. Since the system is actually a mini-computer—complete with hard drive and operating system—start up and shut down take a minute or two. Plus, no two tracks on the Jukebox can have the same name. Additionally, while Creative boasts a battery life of over four hours with the included rechargeable Ni-MH batteries, functions such as starting up, shutting down, and fiddling with settings can reduce this capacity. Luckily, Creative ships two sets of these batteries with each Jukebox.

Perhaps the single biggest problem we had with the Jukebox, though, was managing more than 1000 MP3s—especially if your MP3s come from a variety of sources and aren't comprehensively tagged with song, artist, and album names, which the Jukebox uses to organize files. The small onboard screen doesn't show multiple fields of information for each track in a list view, and the Jukebox's search function is equivalent to searching through hundreds of entries on a cell phone. You'll definitely want to diligently label and organize your MP3s using SoundJam MP (included) before loading them to the device. One downside you can't avoid, however, is the *hours* it takes to transfer thousands of megabytes of MP3s via USB. FireWire would be a much more efficient bus for this volume of bulky files.

Still, we're willing to endure these problems in the face of the Jukebox's incredible storage capacity and its solid performance. We should note that the hard-disk–based Jukebox is slightly more fragile than its flash memory–based predecessors. If you want a portable MP3 player for demanding physical activity, Creative recommends a Nomad II or Nomad II MG. If you want a single device for transporting as much music as possible, the Nomad Jukebox will give you over four solid days worth of listening time.—*Robert Capps*

How Much is 6GB?

Here's a few different ways to look at the Nomad Jukebox's 6GB of storage. (for MP3s encoded at 128 Kbps)

6000 minutes
100 hours
4 days 4 hours
150 40-minute albums
81 70-minute albums
1000 6-minute songs
1500 4-minute songs

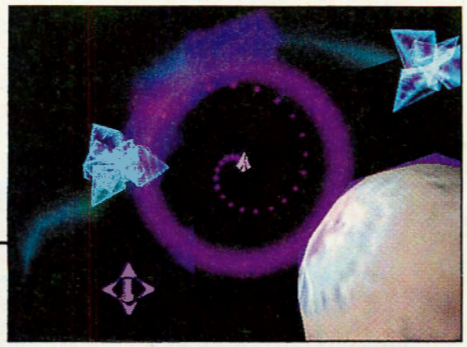
good news: 6GB of storage! Did we mention the 6GB of storage?
bad news: Limited device operating system for managing 1000+ MP3s. Start up and shut down delay. USB interface slow for file transfer. Expensive.

spiffy

Asteroids

fun & games

Company: MacSoft
Contact: 800-229-2714 or 612-249-7600, www.wizworks.com/macsoft
Price: $29.99 (SRP)
Requirements: PowerPC 200MHz or faster, Mac OS 8.1 or later, 32MB of RAM, 60MB of free hard disk space



Some weapons fire multiple bullet sprays, a handy feature in the depths of space.

Asteroids, the quarter-sucking arcade behemoth, rattled some cages in its day. Old-school game fans can rejoice now that MacSoft has updated this classic space shooter. This newest version is the prettiest incarnation to date, but the game is really just an old horse wearing a brand-new hat.

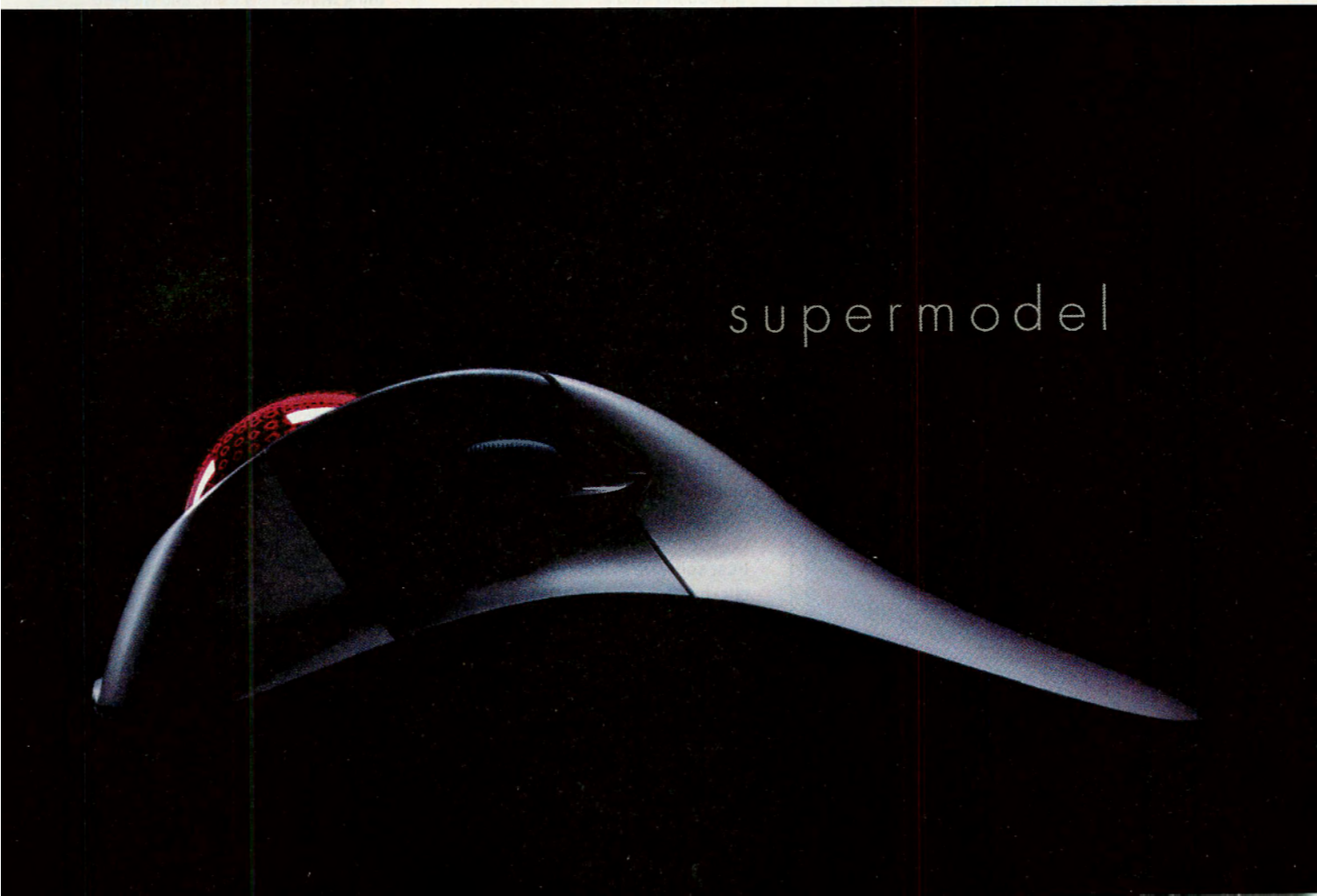
Gameplay remains largely unchanged. Three different spaceships are available for selection at the start. The game requires players to destroy asteroids and enemy spaceships. This new Asteroids offers five distinct, themed stages and 75 different levels to scoot around on, but the actual play never really varies in any great way—which is fine for about 20 minutes.

MacSoft has added 3D graphics, high-resolution backgrounds, and cool explosive effects. Space boulders tumble on all three axes and shatter in a gorgeous display of red pyrotechnics when hit, although most ships and floating objects appear pixelated. There are also more varied enemies and player-controlled spaceships.

You control the game through the Macintosh keyboard, and thankfully MacSoft has included the option to customize key commands. In addition to the standard Asteroids commands (Fire, Thrust, and Hyperspace), players must make room for a surprise Wildcard Weapon, Shields, and a Flip Ship command that rotates the ship. The game requires lightning-fast response time, so most players will likely feast on frustration until they get used to the control scheme.

Simply put, the new version of Asteroids relies just as much on "blast-'em-all" gameplay as its predecessors did—and the thrill of pulverizing space rocks ad nauseam holds only so much appeal.—*Greg Orlando*

good news: Old arcade classic goes 3D. Lots of new features.
bad news: Some graphic effects are pixelated. Still just a new coat of paint on an old Cadillac.



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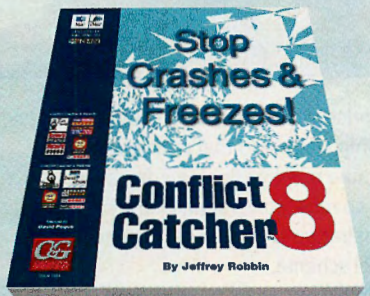

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PowerFile C200

hardware

Company: PowerFile
Contact: 877-838-3669, www.dvdchanger.com
Price: $1,799 (SRP)
Requirements: FireWire-equipped Power Macintosh, Mac OS 9.0 or later, Apple FireWire 2.4 or later

PHOTOGRAPH BY AARON LAUER

Inside this case are DVD movies, every disc *MacAddict* has ever pressed, audio CDs and software installer CDs, and there's room for more.

Jaded folks that we are, it's not often that we receive a bit of hardware that makes us turn our collective heads to ogle it. PowerFile's C200 did the trick for us, and not just because of its stylish case. This 200-disc DVD changer is capable of storing 200 DVDs or CDs on two players—making it ideal for workgroups, small offices, and music and video zealots sharing *a lot* of disc-bound media.

The C200's FireWire interface connects to a host Macintosh, which acts as a sort of server—connecting the changer to the rest of the network. (You can also use the host computer for other tasks—it doesn't have to be a dedicated host.) And don't worry about the C200 eating up one of your precious FireWire ports; the unit has three ports built into the back, so you can branch two peripherals off of it while still maintaining your connection to your host Mac.

Installing the beast is easy—plug it in, install the software (in two flavors: one for host Macs, and another for any client Macs that want to connect to the C200), and go. The host software lets you do administrative tasks such as load and unload media, while the client software is a little more limited.

Connecting to the C200 via the host software is a matter of double-clicking the software's icon—the C200 just shows up as a browsable unit. Connecting via the client software is also a piece of cake—just enter the host Mac's IP address, and a listing of every disc in the changer pops up in a very Finder-like window.

At that point, double-clicking the disc that you want makes the C200 load it into one of its two internal CD/DVD-ROM drives, and then mount it on your desktop, either via FireWire (if you're using the host software) or over your Ethernet network (if you're using the client software). No muss, no fuss. The whole thing worked flawlessly, and we were even able to connect to the C200 using the client software while in Mac OS X Public Beta. (Not so surprising, since Mac OS X has TCP/IP built-in, which the C200 uses to communicate over a network.)

Access speed is limited by the interface, not by the C200. While using the unit over Ethernet, it was able to fill the pipeline with ease—but that wasn't fast enough to stream DVD video, although the DVD player made a valiant effort. Via the FireWire connection to the host Mac, though, we were able to play full-screen DVD video, no problem.

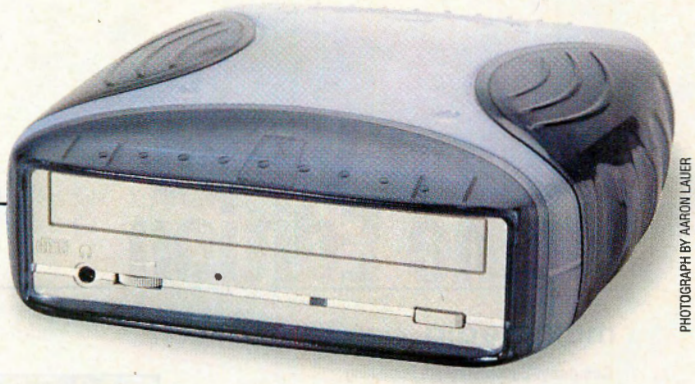
Although the price tag is steep for the average home user, the C200 provides a *lot* of bang for the buck for sharing photo discs, audio/video media, and software. Storage device, server jukebox, DVD changer—the C200 is versatile enough to do any of these jobs, and it has well-engineered hardware and solid software to boot. It didn't take us long to get used to the C200, and now we don't want to give it back.—*David Reynolds*

good news: Easy setup. Fast access. Handles audio CDs, CD-ROMs, DVDs, and DVD-ROMs. **bad news:** We don't own 200 DVDs.

Que Fire Drive

hardware

Company: QPS
Contact: 800-559-4777 or 714-692-3588, www.qps-inc.com
Price: $349.99 (SRP), $319.99 (street)
Requirements: Any FireWire-equipped Macintosh



You'll have a ball with the Que.

PHOTOGRAPH BY AARON LAUER

Take a cue from us—queue up for the Que Fire Drive, which offers consistent, speedy performance packed into a cute graphite case.

After you do one of life's easier installations (you can ignore the software end entirely if you already have Adaptec's Toast 4.1), you'll find that the 8X4X32 CD-RW drive is a plug-and-play—er, buy-and-burn setup. The Que comes with a limited yet very adequate version of Toast 4.1.

Performance is great. After we quickly and successfully burned through a couple of boxes of discs, we didn't have to use a single disc as a reflective coaster. Writing speed is consistent and amazing. In repeated tests, the Fire Drive cooked through 72 minutes of music in 12 minutes, and 600MB of data in just over 9 minutes.

The oddly shaped case (are those ribs or finger grips?) is a dead-on graphite gray (except for the exposed beige face), a nice touch for those interested in color coordination. Plus, the whole package comes out of the box nestled in a handy carrying case with lots of nifty pockets, made out of leather-look vinyl.

A note to audiophiles about your audio files: Contrary to what we've printed in other FireWire CD-RW reviews, this (and theoretically any) CD-RW with a headphone jack *can* play audio CDs. Connect the drive, power up, and place an audio CD in your CD-RW. In the control strip's CD controller, change the default ATAPI DVD-ROM option to the plain ATAPI selection. Plug your headphones into the CD-RW itself, and adjust the volume as you would normally do via the control strip.

The Que Fire Drive is a great CD-RW workhorse that fits in beautifully with a graphite Mac motif. We recommend it.–*Christopher Imlay*

good news: Solid. Fast CD recording. Easy installation.
bad news: Beige face within a graphite case.

freakin' awesome!

superpowers

Canon Video Home Edition

And you thought *iMovie* had limited editing functions.

multimedia

Company: Canon Software Publishing
Contact: 800-652-2666 or 714-438-3000, www.software.canon.com
Price: $49.95 (SRP)
Requirements: 120MHz Power PC or faster, Mac OS 8.6 or later, 64MB of RAM, 50MB of free hard disk space

Welcome to *all* the menu choices in Canon Video Home Edition.

Apple launched the desktop video revolution with iMovie, its bundled, nonlinear video-editing software. Enter the imitator: Canon Software's Canon Video Home Edition. Whereas iMovie offers an enjoyable and complete video capture, edit, and export experience, Canon Video Home Edition simply leaves users frustrated and confused.

This $49.95 software package from Canon combines video, audio, and still images to create custom Web-viewable movies. Unlike Apple's iMovie, however, Canon Video Home Edition is analog-only and can't capture video through a FireWire connection. If you have a FireWire DV video camera, you'll need either a video-capture card for a computer with a PCI slot, or a USB video adapter. (For more information on adapters, see "Dear Max," right.)

Even when your system has the requisite capture hardware and meets the surprisingly modest system requirements, the user experience is disappointing. For starters, the interface is clumsy. The static 640 by 480 window size can't take advantage of larger monitors. This obvious Windows port breaks just about every guideline for a standard Mac interface, right down to the omission of Preferences from the Edit menu. However, the most horrendous oversight is the inability to save a project. That's right—you have to finish your movie at one sitting or start over.

Use the Album to store and organize clips and images for your project.

As for editing options, Canon Video Home Edition has scarcely any. You can do the basics: set markers to denote where a clip begins and ends, put transitions between clips, and even add text to a clip. Canon Video Home Edition also allows you to insert still images and audio (MP3, AIFF, and WAV files) into your movie. Though it is possible to accomplish these basic tasks, the awkward interface complicates even the simplest editing. On a positive note, Canon Video Home Edition allows access to TWAIN-compliant scanners and digital cameras—a handy feature that lets you import images directly into a video project. It's a shame that using this feature resulted in a bomb with both our Umax scanner *and* our Kodak digital camera.

The options for exporting to video are also limited. You can export your project as a QuickTime movie with a maximum resolution of 320 by 240. While this resolution is fine for Web viewing, the software has no provision for outputting to tape or FireWire, no matter what hardware you have.

To call Canon Video Home Edition incomplete is an understatement. This software, priced at $49.95—very steep for what it offers—is unacceptable. We can only hope Canon goes back to the drawing board and rethinks some of the glaring omissions. As Mac users, we welcome the introduction of Mac-compatible software, but we really expect more. If you want a high-quality, affordable package for home video editing, try the $25 shareware program BTV Edit (www.btv.org.uk) or even Apple's free iMovie and $29 QuickTime Pro combo—but take a pass on Canon Video Home Edition.—*Buz Zoller*

good news: An attempt at creating Mac software.
bad news: Doesn't solely support DV. Awkward interface. Can't export video to tape. Can't save projects. Limited editing.

Dear Max

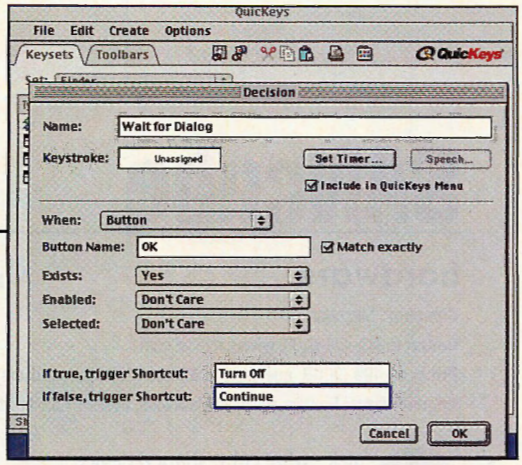
Dear Max,
I cannot use the FireWire on my new iMac with Canon Video Home Edition. What are my hardware options for video capture via USB?
—Uncaptured in Uklah, Oregon

Dear Uncaptured,
You have three hardware options:
1. InterView from XLR8 ($99, www.xlr8.com). This wonderful little device is a joy to use and even includes a full working version of Strata VideoShop, a professional-quality editing application.
2. USB VideoBus for Mac from Belkin ($99, www.belkin.com). This device appears to be an OEM version of the InterView, right down to the bundled Strata VideoShop.
3. VideoFX from Global Village ($119.95, www.globalvillage.com). This capture device includes all needed cables, but unfortunately it bundles software very similar to that in Canon Video Home Edition.

QuicKeys 5.0

utilities

Company: CE Software
Contact: 800-523-7638 or 515-221-1801, www.cesoft.com
Price: $89.95 (SRP), $49.95 (upgrade)
Requirements: PowerPC, Mac OS 8.5 or later, 16MB of RAM, 8MB of free hard disk space, CD-ROM



QuicKeys still requires navigating through a few too many dedicated, complicated dialog boxes in order to create a shortcut.

QuicKeys—what we old-timers used to call a macro utility—records a series of actions, such as mouse clicks and keystrokes, that can perform simple tasks (launching applications) or complicated ones (logging onto your Internet account and checking email). Version 5.0 adds a few handy new features to this reliable and useful utility, though its interface remains a bit too complicated.

QuicKeys 5.0 can trigger shortcuts with voice commands (using your Mac's speech recognition feature) and schedule a shortcut for any specific day of the week. QuicKeys makes it exceptionally easy to create shortcut toolbars, and we really like the new tabs, which store layers of buttons in much less space. Those with limited screen real estate will like the new pop-out toolbars, which disappear until your pointer moves over a hot spot.

This latest version is fully compatible with OS 9's multiuser environment and adds minor but welcome tweaks such as longer, 250-character shortcut names, as well as a generous 2,000-character capacity for the text tool, up from 255. Version 5.0's manual is actually a 30-page addendum to the included 4.0 manual, but we appreciate having *any* printed manual.

QuicKeys saves us tons of time every day, and the latest version, while not quite a revolutionary change, brings plenty of welcome improvements.
—Joseph O. Holmes

good news: New speech triggers. Compatible with OS 9. Improved timer functions. Useful pop-out toolbars. **bad news:** Creating a shortcut remains unnecessarily complicated.

supersonic

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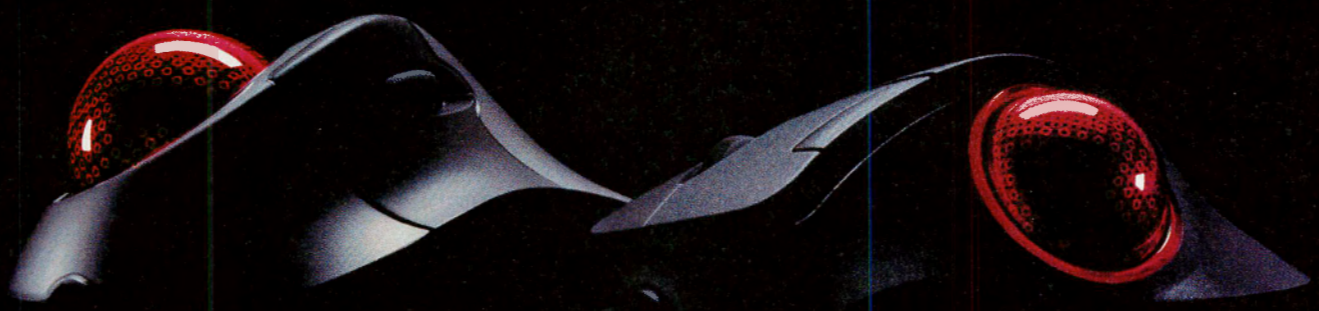

Microsoft
Where do you want to go today?™

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SANcube

PHOTOGRAPH BY AARON LAUER

hardware

As pretty as a G4 Cube, but not quite as consumer-friendly.

Company: MicroNet
Contact: 949-453-6100, www.micronet.com
Price: $1,499 (90GB, one user) to $3,899 (270GB, four users)
Requirements: FireWire-equipped Macintosh, System 7.5.5 or later

Quick—what cube-shaped device holds 90 to 270GB of data and connects up to four FireWire-wielding Macs? It's MicroNet's SANcube. Is this the mythical FireWire server we've been waiting for? Not exactly. This storage area network is essentially a glorified (and overly expensive) external hard drive.

Inside the stylish gray cube is a stack of hard drives (UltraATA/66 hard drives, to be precise) hooked up to a FireWire converter. The SANcube's advertised top speed is 33 MBps (sustained), a bit slower than either FireWire's 50 MBps or UltraATA/66's 66 MBps theoretical limits, but speedy nonetheless. The included benchmarking utility corroborates the 33 MBps boast.

But to get some real-world numbers, we plugged a G4 Power Mac into the SANcube. Considering the key buzzword, RAID (Redundant Array of Independent Disks), the results were not impressive. Unstriped (without the striping discs together), the SANcube scored on par with the G4 Power Mac's internal drive (likewise an Ultra ATA/66)—an acceptable showing. Striped (for high speed data transfer), however, the SANcube gained a mere 20 percent speed boost—faster than an external USB or legacy SCSI-2, but not what we'd expect from a high-priced *storage solution*.

While the flexibility of having a Storage Area Network server (i.e. the SANcube) could be a boon to small workgroups (our test speeds are still faster than 10 Base-T Ethernet speeds), its price relative to performance is a deal killer. Those bent on swapping money for throughput would be better served by Ultra160 SCSI hard drives and Gigabit Ethernet. For casual users looking for more space, the SANcube is just plain excessive.—*Niko Coucouvanis*

good news: Mammoth drive space. Looks great next to a PowerMac G4 Cube. **bad news:** Slow. Pricey. Software doesn't play well with drivers for other hard drives.

yeah, whatever

Mixman DJ Megamix

audio

These are the only two screens you need to see in DJ Megamix.

Company: Beatnik
Contact: 877-295-6593, www.mixman.com
Price: $29.95 (SRP)
Requirements: 200MHz Power PC or faster, Mac OS 8.1 or later, 64MB of RAM (96MB recommended), 250MB of free hard disk space

DJ Megamix is another addition to the Mixman line of remixing-style software for the Mac. Consider it the light version of Mixman's flagship product, Studio. An entertaining program, DJ Megamix offers a great way for DJ enthusiasts to take a shot at remixing and sharing mixes with other listeners.

DJ Megamix is geared toward electronic music listeners—style categories include House, Drum & Bass, Techno, Hip Hop, Trance, and Grab Bag (a collection of miscellaneous styles). The package comes with five Mixman-remixable files called Singles (or D*Plates) per style category, and for $4.95 each you can purchase even more from the Mixman Web site. When you load a Single, the tracks that compose it (drums, bass lines, synthesizer loops, and so on) are divided among the buttons on the two-turntable interface. Pressing a button plays the assigned track. You can record a sequence of button presses, triggering different tracks, to create a song. Unfortunately, while DJ Megamix lets you layer tracks, you can't edit them. When you are finished, you can submit your final song to Radio Mixman on the company's site for Internet broadcast.

In a nutshell, DJ Megamix is a fun toy. At $29.95, it isn't meant as a power tool. By the time you read this, the StudioPro version, which includes professional editing features for under $100, should replace Mixman Studio.
—*Andrew Tokuda*

good news: A fun toy.
bad news: Limited features.

spiffy

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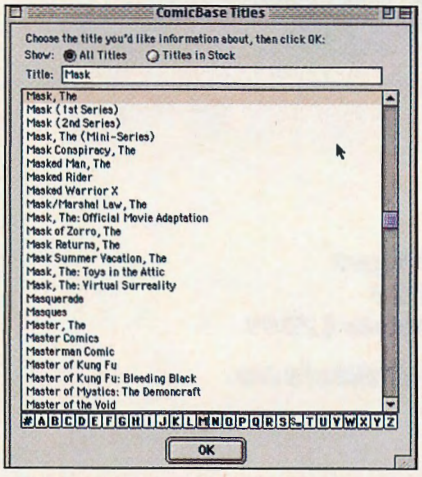
ComicBase Deluxe 5.0

Company: Human Computing
Contact: 408-266-6883, www.humancomputing.com
Price: $149.95 (SRP)
Requirements: PowerPC 68020 processor or faster (200MHz or faster), System 7 or later, 16MB of RAM, 50MB of free hard disk space, 4X CD-ROM

ComicBase 5.0 gives comic book fans near-superhuman powers to manage their collections.

With a customizable database of 12,500 titles and more than 150,000 issues, ComicBase provides dozens of spiffy features. We used its amazing search engine, with search criteria like first appearances and character deaths, to look up the current value of our favorite issues. We also enjoyed the tongue-in-cheek tone of its brief encyclopedia entries for each title, and were impressed by ComicBase's ability to track online auctions on sites like eBay.

ComicBase isn't fancy, and the price—$149.95 for the deluxe edition, which includes unnecessary movie clips and extra cover scans—might knock you flat. But serious collectors seeking superpowered software will find it well worth the expense.—*Nathan Alderman*



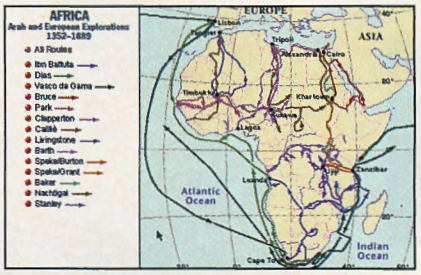
Search for comics at high speed— from favorites like Spider-Man to more obscure titles.

good news: Powerful search features. Online links.
bad news: Steep price. Minor software bugs.

Grolier Multimedia Encyclopedia 2001

Company: Grolier
Contact: 800-955-9877, www.grolier.com
Price: $49.95 (SRP)
Requirements: PowerMac 6100/66 or faster, System 7.5.5 or later, 8MB of RAM, 2X CD-ROM

The 2001 Grolier Multimedia Encyclopedia is a handsomely designed package loaded with useful facts and figures. There's just one problem: Facts and figures are free on the Internet; Grolier's two-CD set costs $49.95.



Grolier 2001's entries include useful historical and geographical maps.

Grolier has made a valiant effort. Performing keyword searches is a snap, though using the Browse function to wade through encyclopedia topics is cumbersome. Clicking a topic in the window's left frame brings up an interesting and clearly written article in the right frame, accompanied by related entries, maps, cutaways, and video clips listed in a pull-down menu at the top of the screen. But Web searches pull up similar content for free—it just takes longer. Multimedia features include video clips, animations, and fun layer-by-layer cutaways of animals or famous buildings. They're generally well done, but swapping discs to access them quickly gets annoying.

Families with young children will love Grolier 2001. College students are better off saving their money and using their trusty Web browser instead.
—*Nathan Alderman*

good news: Excellent content. Easy navigation.
bad news: You can find similar content free on the Internet.

Internet Music Made Easy: The Complete MP3 Package

Company: SpinRecords.com
Contact: 760-496-7746, www.spinrecords.com
Price: $19.95 (SRP)
Requirements: PowerMac, System 7.5 or later, 32MB of RAM

SpinRecords.com's Complete MP3 Package bills itself as a video and CD-ROM introduction to online music. In reality, it's cleverly disguised advertising.

Every product on the interactive disc is accompanied by cheesy ads instead of honest evaluations. Many of the disc's Internet links directed us to the wrong pages; for instance, clicking for more information on a hardware MP3 player took us to the Web page of an artist named Ras U. Dub. A link to win a free hardware player just took us to a page advertising the kit itself.

Among the included software MP3 players, only one is Mac-compatible. A manual that mentions Macs once in passing isn't much help either. The kit also includes 20 MP3 songs of dubious quality, a few QuickTime music video clips and (strangely enough) an instructional videotape hosted by a lukewarm Hollywood comedian.

Ladies and gentlemen, we proudly present the one and only Mac-compatible MP3 player on the Complete MP3 Package's disc.

If you want to introduce a friend or loved one to Internet music, you're much better off sitting down and teaching them yourself.
—*Nathan Alderman*

good news: A few good MP3s.
bad news: Mac-unfriendly. Mostly ads. Many bugs.

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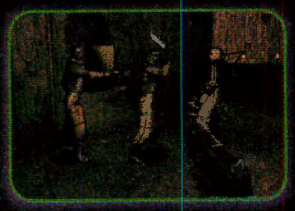

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Kidz Stuff

I Spy Junior Puppet Playhouse

Company: Scholastic
Contact: 800-724-6527 or 212-343-6100, www.scholastic.com
Price: $19.95 (SRP)
Requirements: PowerPC 90MHz or faster, System 7.6.1 or later, 32MB of RAM, 10MB of free hard disk space, 4X CD-ROM, color monitor

Find a Mia2 demo on The Disc.

Puppet shows have always been a big hit with kids, so why not put that natural affinity to good use? That's the premise of this nifty game. Aimed at ages three to five, I Spy Junior Puppet Playhouse teaches children basic reading, logical thinking, and counting skills as they play with puppets.

I spy a more wholesome mermaid than Disney's Ariel.

In each scenario, players click objects (a princess's crown, a forest, or a whale) to reveal written storylines, riddles, and other puzzles, which a voice reads aloud clearly. Kids can click different parts of the sentence (for example, "the princess's crown") to hear them as many times as they like. And if they tire of the built-in scenarios, they can make their own puppet shows using hundreds of different puppets and props, animating as they choose (but without an underlying story or puzzle). Our only complaint is that the CD doesn't include enough built-in puppet shows.
—*Mark D. Shuchat-Marx*

good news: Puppet shows teach reading and math. **bad news:** CD has only seven built-in shows.

spiffy

Mia2: Romaine's New Hat

Company: Kutoka Interactive
Contact: 877-858-8652 or 514-849-4800, www.kutoka.com
Price: $19.95 (SRP)
Requirements: 275MHz PowerPC or faster, Mac OS 8.1 or later, 32MB of RAM (64MB recommended), 40MB of free hard disk space, 6X CD-ROM, color monitor

In this educational, interactive sequel to the 1999 game Mia: The Search for Grandma's Remedy, you control Mia the mouse as she wanders through her neighborhood looking for her mother's new hat (which she foolishly borrowed without asking, then lost), at the same time picking up small jewels called sparklies. In her quest, she comes across a number of characters (some nice, others less so) who confront the player with a host of games and puzzles. Mia2 teaches kids basic science, from plant parts (flowers, leaves, and seeds) to fossil bones (assemble them to form a complete skeleton) to electrical circuits (connecting positive to negative). Not only is the game a fun brainteaser, but the female heroine will appeal to girls and boys alike.

How times have changed: Even Mia drives an SUV.

Our only gripe is that after you play the game once through, it has limited replay value. Some questions are exact repeats, others are very similar. But the first time around, Mia2 is a fun, challenging adventure that kids will really enjoy.—*Mark D. Shuchat-Marx*

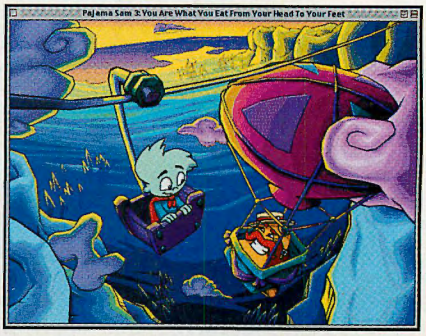
good news: Challenging puzzles. Great 3D graphics and animation. **bad news:** Limited replay value.

freakin' awesome!

Pajama Sam 3: You Are What You Eat from Your Head to Your Feet

Company: Humongous Entertainment
Contact: 800-607-3003 or 425-486-9258, www.humongous.com
Price: $24.95 (SRP)
Requirements: 80MHz PowerPC or faster, System 7.5.3 or later, 16MB of RAM, 4X CD-ROM, color monitor

Pajama Sam, the world's smallest superhero, is back to explore the world of food and nutrition. The witty premise has our adventurous, pint-size hero making peace on Mop Top Island between squabbling members of various food groups, both nutritious and unhealthy. You have to guide Sam through a number of challenging (but not impossible) puzzles and games.



If you really are what you eat, the *MacAddict* staff is doomed.

Kids ages three to eight will find all the games entertaining—most require logical thinking, sharp observation, and deductive reasoning. The animation looks like a cartoon come to life on your Mac, and the fun, bouncy background music has clever lyrics to boot. The game also offers a combination activity and comic book.

Pajama Sam 3 is more of a brain-buster than other children's games, but its purpose of teaching kids (and perhaps some adults) good nutrition is admirable.
—*Mark D. Shuchat-Marx*

good news: Great animation. Fun music. **bad news:** None.

freakin' awesome!

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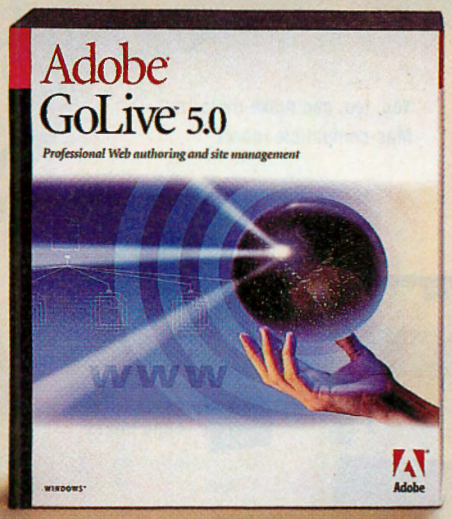
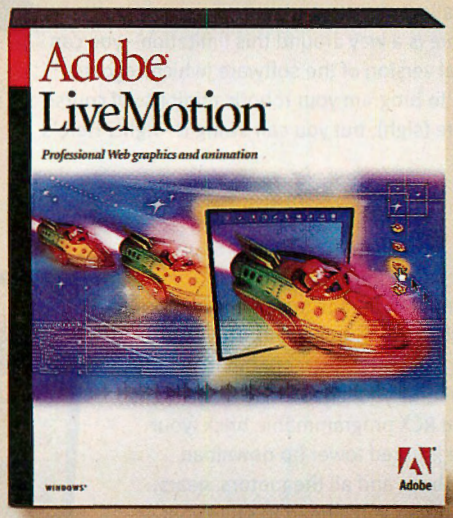
Oh, the awesome webs you'll weave.





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how to

Hey! Lego my Mac!

EASY

Use Lego Mindstorms

by David Reynolds

TOUGH

This stuff's for the pros.

TRICKY

It'll take some effort, but you can do it.

EASY

The fundamentals, if you will.

WHAT YOU'LL NEED

- **MindStorms Robotics Invention System**
- **RoboLab software**
- **RoboLab manual (optional, but useful)**
- **Nine-pin PC-to-Mac serial adapter (for non-USB Macs)**
- **Nine-pin serial-to-USB converter (for USB Macs)**

In the world of peripherals, the lot of the Macintosh has improved greatly since USB arrived, yet there's still one item Mac users can but lust after—the Lego MindStorms Robotics and Invention System. This expensive toy combines Legos, programming, and robotics in one great mound of fun. The problem is, the commercial version of the MindStorms is PC only—no Macs allowed.

Fortunately, there *is* a way around this limitation—you can use the educational version of the software (which Lego *has* ported to the Mac) to program your robotic minions. Of course it'll cost a little more (sigh), but you can swing it—right? Here's how to go about it.

You, too, can make motorized, Mac-compatible robots.

PHOTOGRAPH BY AARON LAUER

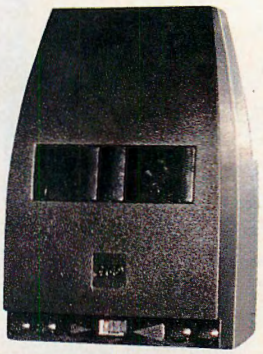
Robotic overlords, come boast about defeating your pitiful human creators at www.macaddict.com/debate.

1 Gather the Lego Basics

The first step is to get your Lego gear together, and that means buying the MindStorms Robotics Invention System. The gear ain't cheap (it runs $150 on the street), but it includes most of the components you'll need. The kit includes three key items: the RCX programmable brick (your robot's brains), the infrared tower (to download programs to your robot), and all the motors, gears, sensors, and Lego bricks you'll need to build your robots. Don't forget to install all the batteries—the RCX brick takes six AA batteries, and the IR tower takes one nine-volt battery.

RCX brick

Lego bricks



Infrared tower

Handy URLS

We're not the first folks to figure out that you can use your Mac with the Lego robotics kits. If you want more information, here are a few sites you can visit. Some contain Mac tips, while others are worth a visit just for the robot control programs you'll find there.

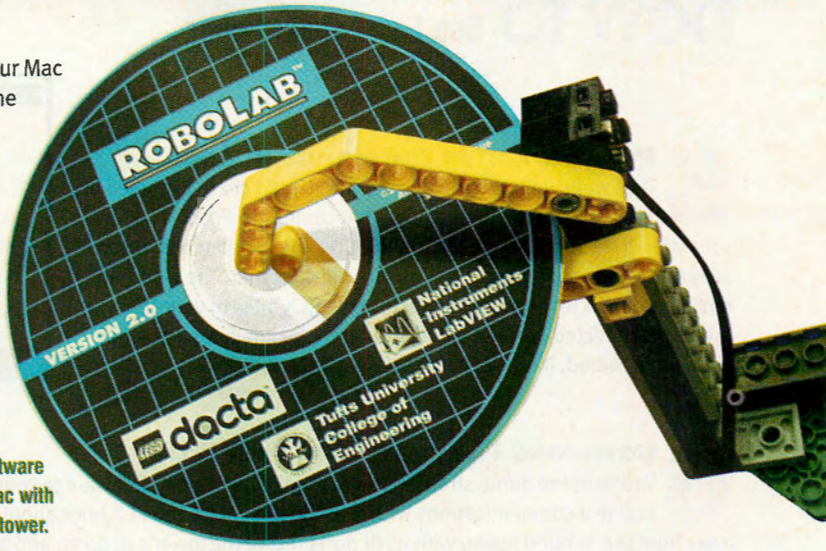
Using MindStorms with a Macintosh
www.enteract.com/~dbaum/lego/macmind
This site has a good rundown of what you'll need to get your MindStorms and your Mac talking to each other. It also includes a lot of info on other ways to use your Lego set, including alternative programming languages and VirtualPC.

Unofficial Questions and Answers about MIT Programmable Bricks and Lego MindStorms
mevard.www.media.mit.edu/people/fredm/mindstorms
This must-visit site has incredible information about the Lego RCX brick (the brain of the MindStorms), including almost everything you need to know about using the MindStorms System with a Mac.

RoboLab Home Page
www.lego.com/dacta/robolab/default.htm
This is the official RoboLab site, which includes information about the MindStorms education sets. It offers sample programs, construction ideas, technical support, and other niceties.

2 Obtain the Software

The biggest sticking point to using the MindStorms with your Mac is the lack of software, but curiously, there *is* a version of the software that runs on the Mac—it's just not sold through standard retail channels. Instead, it targets the education market (why Lego didn't just put a Mac version in the kit is beyond us). Luckily, you don't have to endure a year as a student teacher to buy the software; just point your browser to Pitsco (www.pldstore.com, or call 1-800-362-4308 and ask for the RoboLab Investigator software, part number W900051, $49). As long as you're at the site, buy the manual, *The RoboLab Teacher's Guide, part 1* (part number W900052, $25). To use the software, you'll need a Power Mac or compatible running System 7.5 or later with 32MB of RAM, 85MB of hard drive space, and an available serial or USB port.



This CD-ROM contains the software you'll need to connect your Mac with the RCX brick via the infrared tower.

3 Connect Your Mac

You have to jump through one last hoop—connecting the infrared tower to your Mac. The RoboLab software uses the infrared tower to download control programs you write to the RCX brick. Unfortunately, the IR tower requires a PC serial connector. To use it with your Mac, you'll need an adapter. For USB Macs, use a serial-to-USB converter. There are several, including those made by KeySpan (www.keyspan.com), Momentum (www.momentumus.com), and Entrega (www.entrega.com). We used a Momentum uConnect ($99), which has both a PC-style and a Mac-style serial connector—it worked fine, and we didn't need an adapter to change the Mac serial port to a PC one.

For those of you with serial-based Macs (or if your USB-to-serial adapter has only Mac serial ports), you'll need a serial adapter that connects the D-shaped, nine-pin cable on the IR tower to the round, eight-pin Mac serial port. You can find these at most large computer electronics stores, or you can order one from Pitsco (part number W4119830, $15).

When you have your cables together, install the driver software for your USB-to-serial adapter (if you're using one), shut down your Mac, and then connect the infrared tower to the serial cable and the serial cable to your Mac. Go ahead and restart your Mac. (If you're brave, you can try just plugging everything in—our adapter requires that you shut down and restart, but yours might not).

We used a Momentum uConnect serial-USB adapter to connect the Lego infrared tower to our USB-based Mac. It worked without a hitch.

4 Install and Configure the Software

Once your Mac boots, pop the RoboLab software in your CD-ROM drive and double-click the Mac Install icon. After you agree to the legalese, an installer screen presents itself. Go ahead and install both the Programmer and the Investigator software—these take an extra bit of space, but they're worth it. After installation, launch the RoboLab software. When the main window pops up, click the Administrator button to go to the preferences screen, where you can test your setup. Click the icon next to the Select Com Port choice at the top. In the window that pops up, click the name in the center to get a list of available serial ports. Click the one you want, then click the green check box. (USB-to-serial adapters should show up here, too.)

Our uConnect USB-to-serial adapter showed up just fine in the Com Port window.

5 Put Yourself in the Hands of Lego

If all went well up to this point, you're ready to put yourself in the hands of the instructions that came with Pitsco's software—the "RoboLab Video" (on the CD). The installer has put an alias to this on your desktop, so just double-click that. The video will run you through testing and connecting the RCX brick to your Mac via the now-connected infrared tower. Although the images in the video are a bit outdated, it has lots of valuable information.

The video that comes with your RoboLab software is well worth watching—mainly because it tells you how to get the thing talking to your Mac.

6 Download Firmware and Test it Out

You're in the home stretch—you're ready to download firmware to your RCX brick and test communications with it. To do this, place the RCX brick about six inches away from the infrared tower, with its IR ports facing the tower's IR ports, and push the on/off button on the brick. Launch the RoboLab software and click the Administrator button. In the window that pops up, click the Download Firmware button. Your Mac should download firmware to the RCX brick—the process takes about four minutes. Once that's done, click the Test RCX Communication button. The IR tower and the RCX brick should have a nice, short chat to confirm that all is well. If communication doesn't work, make sure that you've turned on the RCX brick and that a green light shows up on the front of the IR tower when you test communications. Bright light can interfere with Mac-RCX communication (don't ask us why—it's in the manual), so try moving the RCX and the IR tower to a darker location.

Congratulations! You're now ready to use the RoboLab software to write your own control programs for your Lego MindStorms robots. Good luck.

This is what you'll see if all the bits and pieces are talking. Otherwise, check the cable connections and make sure you've got fresh batteries in the RCX brick and infrared tower.

David Reynolds gave up his plans for robotic world domination when he realized how easily Lego robots could be smashed.

MiniView™
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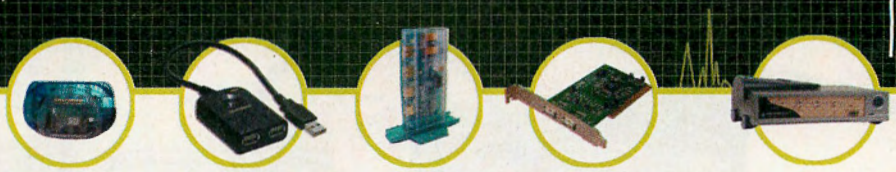
www.iogear.com



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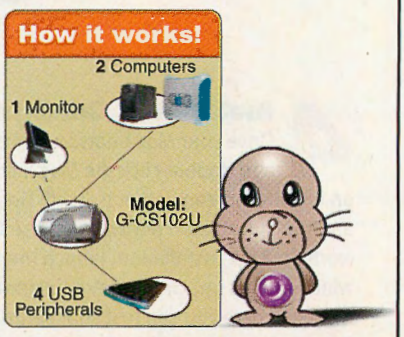

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TRICKY

Hack Your Mac OS X

by Ian Sammis

WHAT YOU'LL NEED

- Mac OS X public beta
- A 32-bit icon-editing program such as Iconographer (www.mscape.com/products/iconographer.html)
- A program such as IcnsMover to convert between Mac OS X–style .icns files and icns resources
- A willingness to fiddle around with the innards of a beta operating system

Find Iconographer 2.0, IcnsMover, and Res2Data on The Disc.

Want to show off your own hacks? Do it at www.macaddict.com/debate.

There must have been a time, way back in 1984, when the first Mac user realized the implications of the resource fork, that file-system hidey-hole where the Mac keeps all of its menus, icons, dialog boxes, and the rest of the user interface details. "Wait a minute," you can almost imagine that protogeek saying, "ResEdit can open the System and the Finder?" Thus began 16 years of icon changes, altered menus, and interface-mashing madness. While icons, menus, and the rest have moved beyond the Macintosh platform, the Mac community has retained its spirit as one of the most avid groups of interface customizers in existence.

Now, with Mac OS X, the basic rules of the game have changed. resource forks give us incredible customizability, but they also give us those odious .bin and .hqx formats we must use whenever we deal with the rest of the computing universe. Plus, the ability to change system resources with ResEdit means any four-year-old with enough hand-eye coordination can translate the Finder's menus into his or her own strange yet beautiful language. Moreover, the resource fork doesn't allow an application to store more than a single language's version of fonts, menus, and text in any predictable, system-controllable way.

For OS X, Apple addressed Resource fork limitations by expanding upon a NeXT innovation: the bundle. A bundle is a folder that—thanks to its file name extension—can tell the Desktop to treat it as a single file or application. Inside the bundle, though, and you'll see a host of files and folders containing all the tweakable information you could want—these are the keys to hacking customization into your system.

Here, then, are some initial tips for those brave souls willing to go in and tweak the new Mac OS beta. To keep things simple, we'll focus primarily on the Mac OS X Calculator—venture into other areas at your own risk.

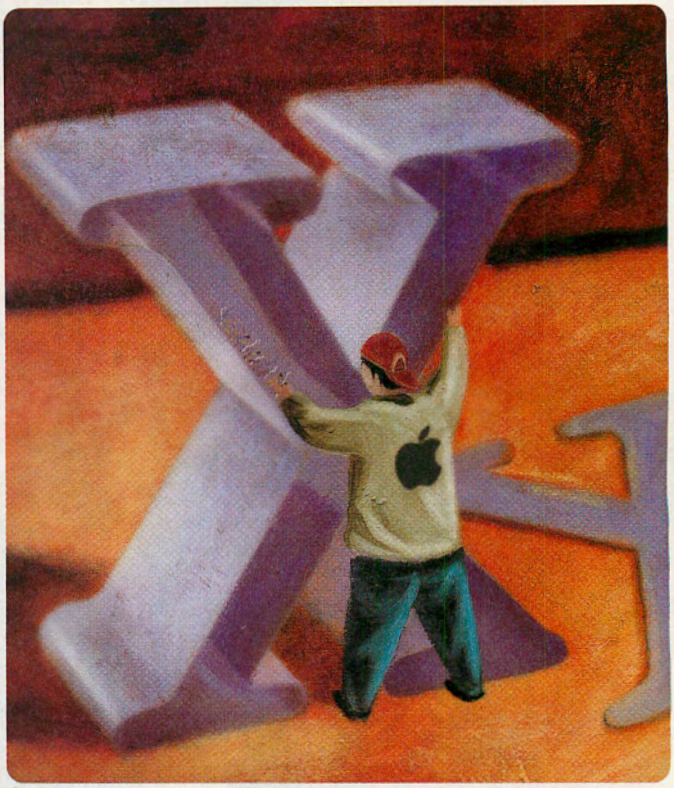
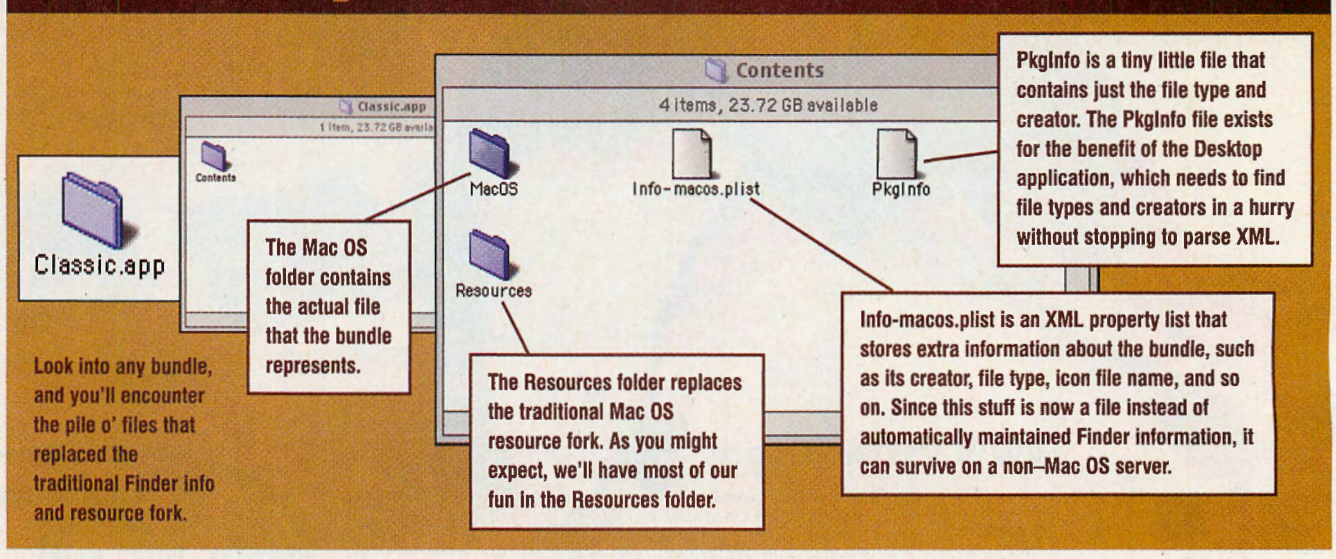


ILLUSTRATION BY SIMON SHAW

The Anatomy of a Bundle

Poke around inside any bundle, and you'll see a set of standard folders that will quickly become familiar. Here's what's inside.



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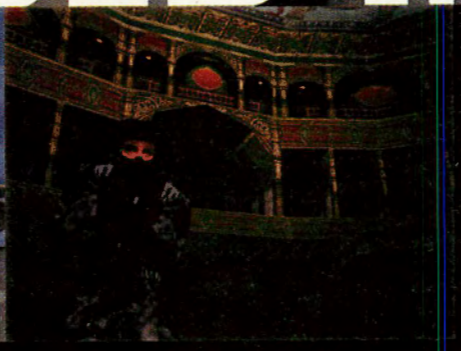

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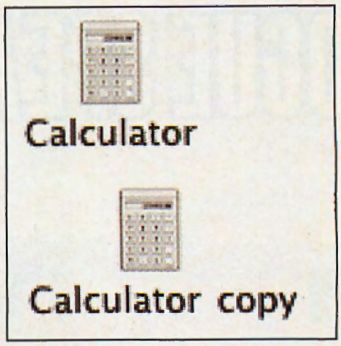
1 Back Up the Hackee

Let's mess around with the Calculator; it's a relatively unimportant application, so if something goes wrong you won't lose too much! Just to be on the safe side, though, start by duplicating the Calculator.

In the Desktop application, click the Applications button in the toolbar to see the applications installed on your system. Select the Calculator icon, then choose Duplicate from the File menu. A new file, Calculator Copy, should appear. You've now got a backup in case you make any mistakes.



As always, back up before you hack!

2 Break Into the Bundle

Your first challenge in hacking an OS X application is getting into its bundle—you can't do much with the Calculator while it behaves like an application instead of a folder. The easiest way to break into a bundle is from the Terminal application, which provides access to the Unix command line.

Run the Terminal application (if you haven't moved it, you should find it in the Utilities folder inside the Applications folder). Terminal will present a window containing a Unix command line. Because Apple only intends experts to use Terminal, it ignores the usual distinction between bundles and applications. Type the commands shown below.

```
/bin/tcsh (ttyp1)
[node-18-254:/Applications] isammis% cd /Applications
[node-18-254:/Applications] isammis% mv Calculator.app Calculator
[node-18-254:/Applications] isammis%
```

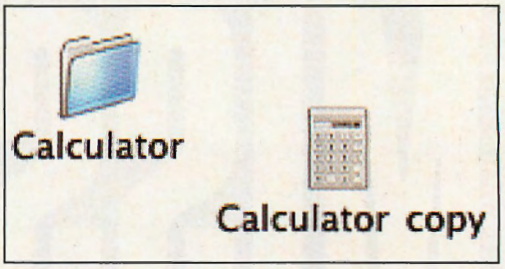
These two commands will let you hack the Calculator.

Let's consider the two commands you've just entered. The first line tells the Terminal session (the stuff that's happening in the Terminal window) to change the directory (cd) to the Applications folder; the slash in front of Applications tells the terminal the Applications folder should sit directly on the startup disk instead of in a folder. The second line renames the calculator from Calculator.app to Calculator.

"But wait," you say, "it was called Calculator in the first place!"

Actually, from the system's point of view, it wasn't. Mac OS X considers any folder that ends in .app an application bundle. Moreover, it hides the .app extension to prevent you from inadvertently changing applications into folders every time you change the folder names! Fortunately for those of us who like to hack, Terminal operates with all safeties off—and as a quick glance at the Finder will verify, you've just changed the Calculator from an application into a folder.

You're now ready to get hacking. Leave Terminal running; you'll use it when you're done hacking to turn the Calculator back into an application.



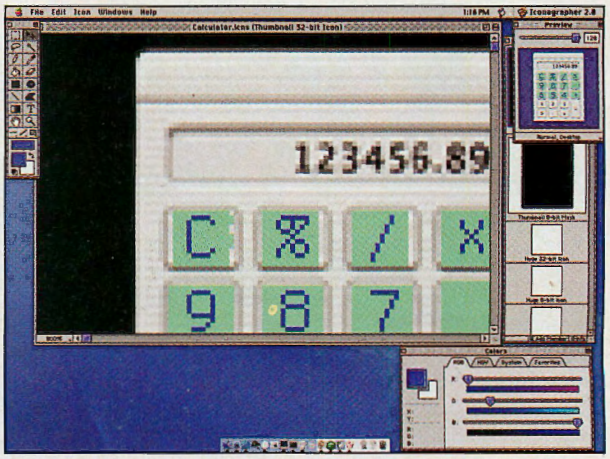
Now that you've removed the .app extension, the Calculator looks like a normal folder.

3 Icons and Icns

Let's start with an updated version of a classic hack—changing a program's icon. Inside the Calculator's resources folder, you'll see a file called Calculator.icns. This is the icon for the Calculator application, stored in icns format (icns is Apple's new 32-bit icon format, introduced with Mac OS 8.5). These icons aren't stored as Mac OS resources, so you can't get at them with most icon editors designed for the traditional Mac OS.

Fortunately, there's an easy fix—all you need is a cheesy little program that copies an .icns file to an icns resource, where you can edit it. We wrote a Realbasic program, IcnsMover, that's up to the task. Launch IcnsMover. From the File menu, choose Convert .Icns File, then choose Calculator.icns and save the converted file. Now you can use your favorite 32-bit icon editor to make a new icon. (We used Iconographer, but any icon editor that recognizes Mac OS X's 128-by-128-bit icons should work).

When you've created the perfect icon in your chosen program, use IcnsMover to change it back into an .icns file. Name the file Calculator.icns, and replace the original .icns file. You've now changed the Calculator's icon—congratulations!



Here we are, failing to improve on the looks of the calculator icon in Iconographer. Artists might fare better.

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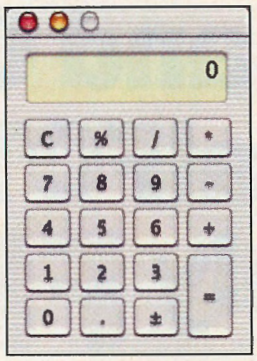
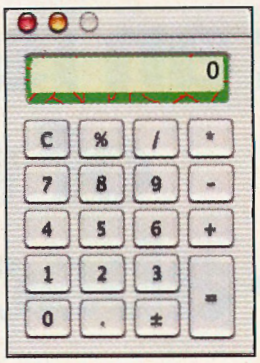
4 The Calculator's Screen

You've probably noticed another interesting-looking file in the calculator's Resources—lcd.tiff. A quick peek inside should verify that lcd.tiff is the Calculator's slightly yellowish display screen. Open the file in your favorite image-editing application (we used Lemke Software's GraphicConverter, www.lemkesoft.com) and change it to your preferred look.



A close look reveals that the text background is a rectangle slightly yellower than the surrounding icon area. Keep this rectangle in mind as you design your display's look.



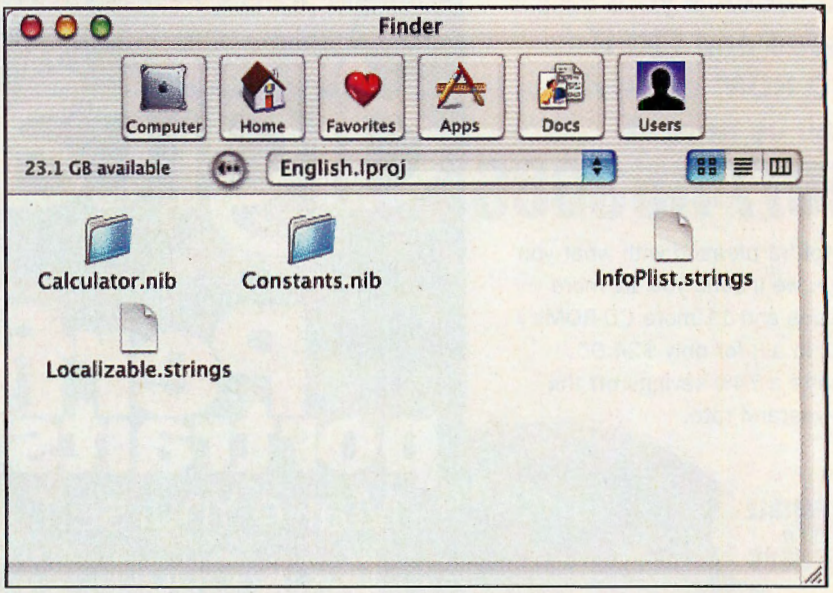
Ah, that's better—just the thing for our Zergling's back-to-school special.

5 The Localized Folders and a Hack for Another Day

The various .lproj folders (English.lproj, Spanish.lproj, and so on) are the trick behind OS X's unbelievably good multilingual support. Every menu item, dialog box discussion, and button text that the application must display in one language or another is stored inside the .lproj folders.

Look inside these folders, and you'll see either .nib folders and files or .rsrc files. This offers the easiest way to distinguish Carbon and Cocoa apps: Cocoa apps use NeXT's .nib files, while Carbon apps use Mac OS–style resource files. You can't use ResEdit to edit .rsrc files directly—you'll have to convert them into standard resources, edit them, then convert them back into .rsrc files. We've written another cheesy program to do this, called Res2Data.

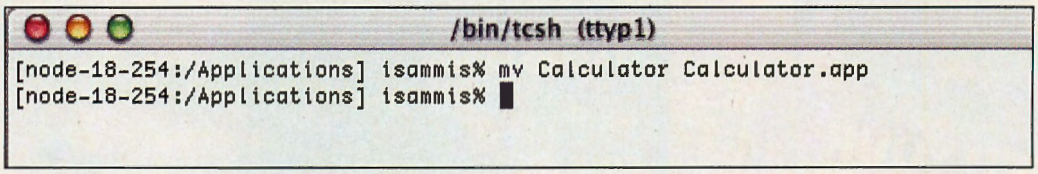
Unfortunately, the Calculator is a Cocoa app. Since we can't edit .nib files until the appropriate tools become available, we'll stop here to check out the results of our hacking.



As of press time, the tool we need to edit .nib files isn't available to the general public. Stay tuned for nib editors!

6 Bundle Up and Go

Just type the first line shown here into the Terminal window. This will tell the system to once more start treating the Calculator like an application instead of a folder. That's it! You've successfully hacked your first Mac OS X application. Have fun!



Now that we're all done, turn the Calculator back into an application.

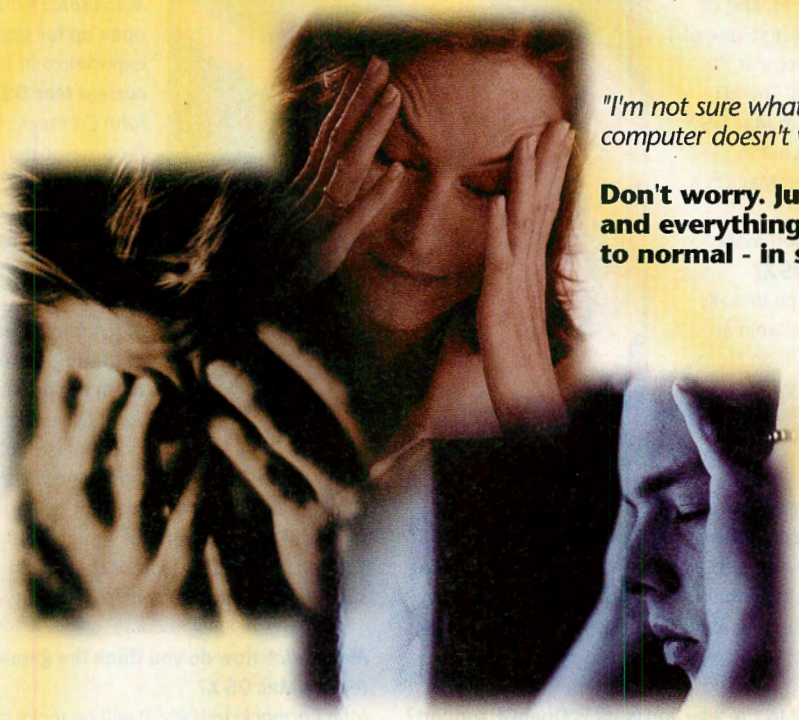
And there's the final product—a well-hacked calculator.

Ian Sammis utterly destroyed one installation of Mac OS X before finding a relatively safe hack.

In A Bind? Click...

Rewind

Reverse Disasters and Mistakes...Guaranteed!



"I'm not sure what I changed, but my computer doesn't work anymore."

Don't worry. Just Rewind and everything will be back to normal - in seconds!

"Everything worked fine yesterday. Now, five minutes before the big meeting, nothing is working."

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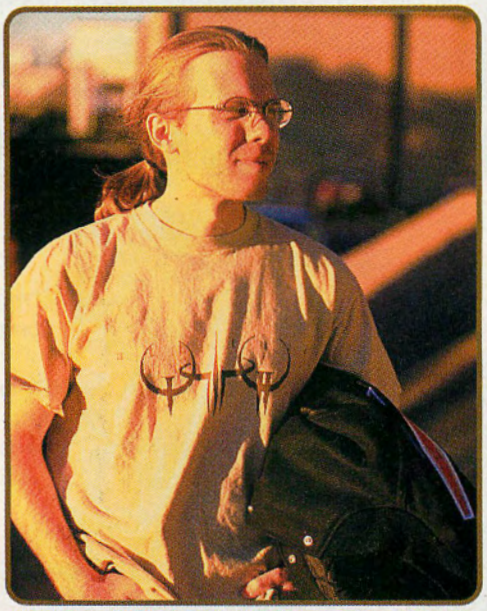
John Carmack on OS X

Quake Game Guru Speaks Out on X Games

What games do you want to see on Mac OS X? Discuss it at www.macaddict.com/debate.

With all-new features designed to make the Mac OS ostensibly better at everything, it seems important that X would also be better for the burgeoning Mac games renaissance. John Carmack, creator of Wolfenstein, Doom, and of course the Quake series, is also one of the Mac gaming scene's greatest advocates and benefactors. The 3D guru has been tinkering with Mac OS X and kindly took some time out to answer our questions about Mac OS X.



Wearing a Quake T-shirt, John Carmack peers into the future of the Mac OS.

PHOTOGRAPH BY MICHAEL MORDLER

***MacAddict:* What excites you most about working with Mac OS X?**
John Carmack: When I am on Win2K, I miss the functionality available at the Unix prompt. When I am on Linux, I miss the polished GUI of Win2K. Mac OS X can deliver the best of both worlds.

***MacAddict:* Given that you tend to work on PC and Mac versions simultaneously, will OS X alter the way you straddle both versions?**
John Carmack: Some development tasks are easier (certain profiling and remote debugging tasks) under the Unix base of X than under Windows, so the Mac will be a useful tool for us now, instead of just [another platform we need] to make sure the code works on.

***MacAddict:* How important to the way you work is OpenGL support?**
John Carmack: Critical. I won't do any graphics work on a platform without OpenGL support. Sure, I can work with any graphics API, but I generally have better things to do with my time than retargeting existing code, especially to a proprietary API.

***MacAddict:* Does Mac OS X lack any game-related features?**
John Carmack: There still isn't a good low-latency sound interface.

***MacAddict:* What possibilities does OS X open up for games? How will the gaming experience in X differ from that in the current Mac OS?**
John Carmack: The support for SMP [symmetric multiprocessing] will allow games that take advantage of it to run faster, and the OS architecture should make the entire system much more stable, even when a game misbehaves.

***MacAddict:* What are id Software's plans for migrating current games to X and helping them run on X?**
John Carmack: Quake 3 runs on OS X right now but isn't officially supported. I'm sure someone will move one of the open-source Quake 1 versions over fairly quickly. We don't have immediate plans to move Quake 2 over, but it might happen in an unsupported form. *You can find an OS X port of Quake 3 Arena at the Omni Group's Web site (www.omnigroup.com/community/freeware/quake3).—Ed.*

***MacAddict:* How do you think the gaming community at large will receive Mac OS X?**
John Carmack: Initially, it will be rocky for gamers. Not all applications will work, and you won't see visible improvements in the games that do work. Hopefully the other improvements in the system will tide users over until games become more tailored to OS X.—*Frank O'Connor*

RUNNING CLASSIC GAMES ON MAC OS X

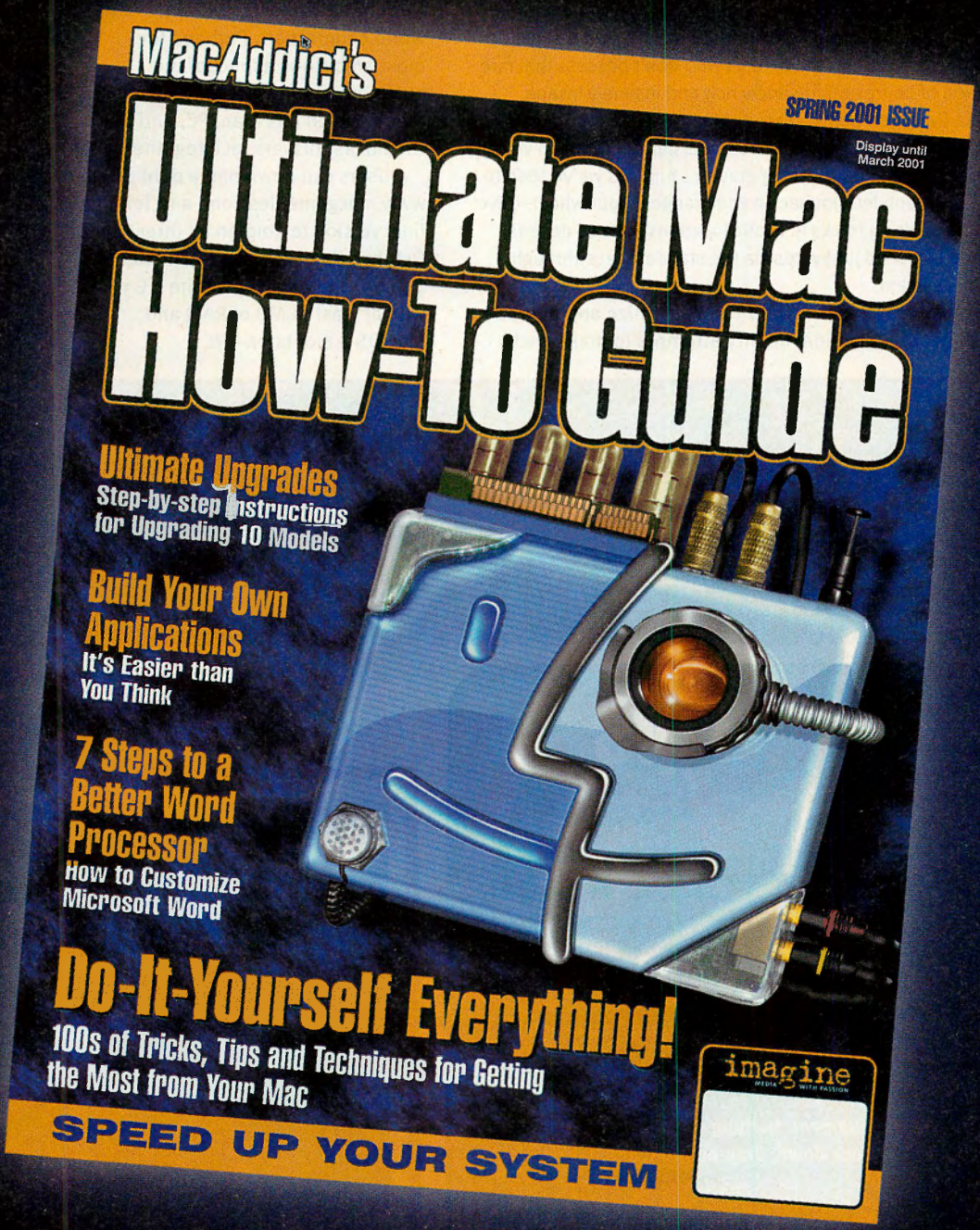
Although the final version of Mac OS X isn't out just yet, we *have* had a chance to try several games while running the beta version. To our surprise, more games seem to run in the Classic layer than we expected—games such as Diablo II and Marathon, which we would have been willing to bet would have crashed harder than Robert Downey Jr. at Betty Ford.

The secret to getting a game to run in the Classic layer is to turn off any portion of the game that addresses your Mac's hardware directly. For example, to get Diablo II or Unreal Tournament running, make sure you've set the game to use software rendering instead of hardware rendering. You'll find you can get many Classic games to run, but you can't use your video card's acceleration to make things look smooth and pretty.—*DR*

Stop the riots! You can *still* play Castle Wolfenstein 3D with OS X.

ON NEWSSTANDS **NOVEMBER 28TH** THROUGH **FEBRUARY 26TH**

The best Mac upgrade you can buy this fall.



The creators of *MacAddict* magazine celebrate the extreme functionality of the Macintosh in *MacAddict's Ultimate Mac How-To Guide*!

Stuffed full of hundreds of tips, tricks, and tutorials, this bonus issue features articles on everything from upgrading your RAM to building a video game.

With the *Guide*, Mac novices and tech-savvy veterans alike will learn how to take their Mac use to the next level.

And, as if the best Mac info weren't enough, the *Guide* also comes bundled with a CD-ROM full of over 600MB of the hottest, most useful Mac software in existence.

BUY IT. READ IT. KEEP IT.

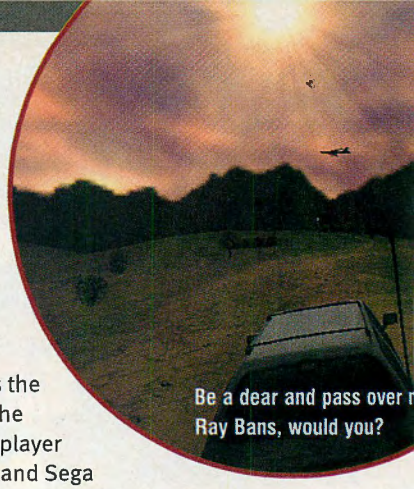
Hey, I Spilled My Starbucks!

Off-Road SUV Racing with 4X4 Evolution

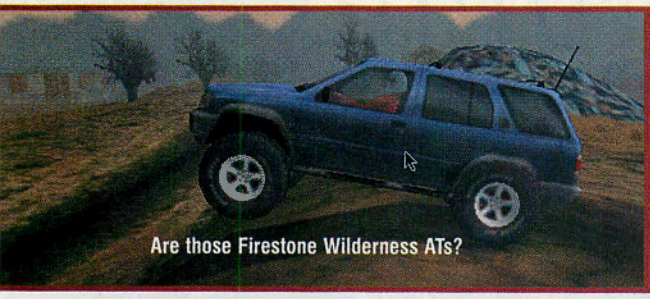
Perhaps a few Nissan Xterra and Lexus LX-470 owners would snap up the opportunity to jump their SUVs over a small canyon in Arizona. But for those of us who don't possess that rare combination of being both insanely rich and insanely insane, there's 4X4 Evolution (www.4X4evolution.com), a new off-road racing game from Gathering of Developers partner Terminal Velocity. Built on one of the most stunning graphics engines we've seen to date, 4X4 Evolution lets you race a wide range of four-wheel–drive pickups and SUVs on tracks in exotic locations such as deserts, forests, and scorched junkyards via the standard race-through-checkpoints system.

As in most racing games, you can customize and upgrade your vehicles, and Terminal Reality attempts to make each truck handle like its real-world counterpart. Perhaps the most ambitious aspect of the game, however, is its multiplayer mode, which lets Mac, PC, and Sega Dreamcast players race together over the Net.

Users can download a public beta of the game from www.macgamefiles.com, and Terminal Reality expects the final version to ship on all three platforms in late October. The expected retail price is $39.95, and 4X4 will require a G3 with at least 64MB of RAM and Mac OS 8.6 or later.—*RC*

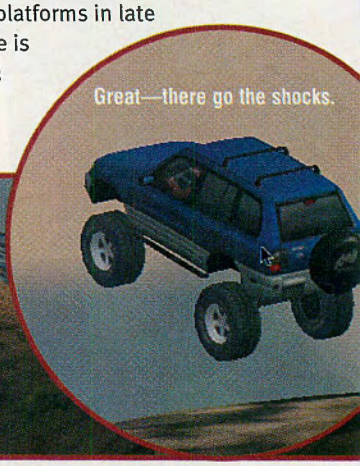


Be a dear and pass over r
Ray Bans, would you?



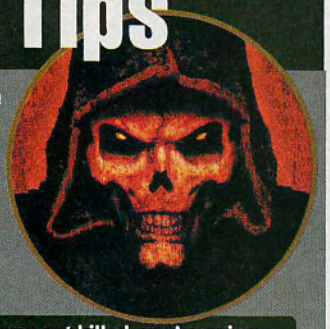
Are those Firestone Wilderness ATs?

I sure hope there's a place to land.



Great—there go the shocks.

Diablo II Tips



Our crack gaming staff has been hard at work playing Diablo II, and we've come up with five tips to help you through the tough times while fighting the Prime Evil. (For more tips, see Ian Sammis's Diablo II review, Oct/00, p48.)—*DR*

Store backup gear in your stash. **If you get killed, you're going to need it to recover the good stuff from your previous incarnation's body.**

Always repair your equipment. **Nothing sucks more than getting caught in a knock-down, drag-out fight and having your armor fall apart.**

Sample the various character types. **Even if certain characters don't appeal to you, give them a shot. Blizzard put a lot of effort into making them fun, and they might surprise you.**

Develop a distance attack. **In later levels, it's crucial to have the ability to whack enemies from a distance.**

Try Battle.net. **Playing Diablo II with several other cooperative players is a real kick, especially for those who used to play Dungeons & Dragons way back when.—*DR***

Screen Shot of the Month

We're looking for the best and brightest screen shots to grace the pages of our humble rag. If you would like to add something to this little corner of the print world, send your screen shot to letters@macaddict.com.

Artist's Statement
I wrote "Hi" on the canyon wall for you. Enjoy!
—*Ward Seward*

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ask us

This Ask Us section was sponsored by the letters A and Q and the number X.

Questions?

Submit technical questions or helpful tips directly via email (askus@macaddict.com) or c/o ***MacAddict*, 150 North Hill Dr., Brisbane, CA 94005.**

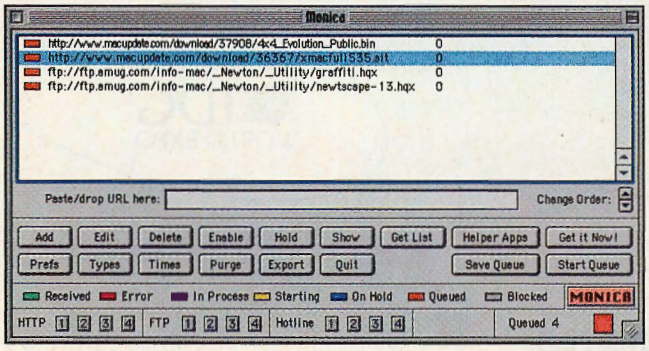
Find Rezoom, Monica, and IconaRanger on The Disc.

Make some noise at www.macaddict.com/debate.

Q With all the recent cool game demos available for download comes a new problem. My computer connects to the Internet via a 56-kbps modem. Many of these demos are very large and take a long time to download. The problem is that I often get disconnected while downloading a file, which means I have to start over. Is there a way to save my downloads so I can continue where I left off should I get disconnected?

A The large size of many current downloads almost requires that you have a cable or DSL connection just to keep your software current. Luckily, some software solutions can help out.

Our favorite is an application called Monica from Black Diamond Products (www.ziggy.speedhost.com). This clever program lets you create a queue of files you want Monica to download in order. If something happens during the download, you can just pick up where you left off. Monica lets you create a list of files from FTP sites, Web sites, and Hotline servers—just queue them up and let the program run. Another option is a handy little AppleScript utility called Rezoom from Black Light Software (http://blacklightsw.hypermart.net). While Rezoom isn't as fancy as Monica, it gets the job done. If you have a partially downloaded file and know the source URL, Rezoom can reconnect to the site and resume the download.



Monica (no, not *that* Monica) is a handy tool for downloadaholics.

Q I have been a Mac user for many years and finally upgraded to a new ruby iMac. My old computer had a floppy drive, and therefore I saved all my files to floppy disks. I bought a USB floppy drive for my new iMac, but many of my floppy disks don't work with the drive. What is happening? I know the floppies are good because they still work on my old computer!

A When Steve Jobs proclaimed the floppy dead with the introduction of the floppy disk–free iMac, some issues never quite got resolved for those who still rely on this medium as a storage method.

The good news is that there are *lots* of options for external disk drives—a quick look at the peripheral database at www.iMac2day.com shows plenty of cool USB floppy drives. The bad news is that all of these USB floppy drives are incompatible with 400K and 800K floppy disks. Standard 1.4MB floppy disks work great (faster, in fact, than most original floppy drives), but 400K and 800K floppy disks simply will not work with modern USB floppy drives.

If you can't remember the size of your disk, look at the holes along its top: one hole indicates it's at most an 800K disk and is incompatible, while two holes indicates it's a 1.4MB disk and will work. If you need to get at data stored on an older disk, you'll have to use an older Mac to transfer the data to a 1.4MB disk, then pop the 1.4MB disk into your iMac—not a pretty solution, but it's the price of progress.

Q I read your article about transferring old phonograph records to CD ("Turn Your Vinyl Records into Audio CDs," Jul/00, p80) and have one question: How do I connect my stereo's two RCA jacks to my computer? Must I have an AV Mac to do this? I know there are PCI cards available for audio input, but they are rather expensive.

A It is a common misconception to think you need some costly extra hardware to capture high-quality audio on a Mac. In fact, every recent Mac with the exception of the iBook and the G4 Cube has a high-quality audio-in jack. This is a standard $^1/_8$-inch stereo jack, which accepts any line-level analog audio signal. The tricky part is that most stereo equipment uses standard RCA jacks—the red-and-white plugs you typically find in home stereos. To use these connectors with your Mac, all you need is an inexpensive adapter. Radio Shack sells one on its Web site (www.radioshack.com) for less than $4 (part number 274-369).

This inexpensive adapter from Radio Shack may be just what you need to transfer audio to your Mac.

PHOTOGRAPH BY AARON LAUER

Q Our family uses OS 9's Multiple Users control panel to administer use of our iMac in the living room. It works great, but we have run into one major problem: We cannot use iMovie with our setup! I have tried everything and the program still won't work unless I log in as the owner. No one else can use the program. Did I just uncover an incompatibility?

A It is not unusual for a new technology to introduce lots of new issues and incompatibilities, and you can expect more than the usual number with the Multiple Users log-in system in OS 9. The reason is that at its core Multiple Users is a security system, designed to keep users out of information they are not authorized to access. Apple has done an above-average job of letting most applications function properly in a Multiple Users environment by providing developers with strict programming guidelines. Unfortunately, the company didn't follow its own guidelines when writing iMovie 1.0!

Luckily, Apple built a few workarounds into the Multiple Users system, which enable troublesome applications to function. To get iMovie to work, create a new folder called Other Applications• (create the bullet point by typing Option-8) inside the Applications folder. Put any troublesome

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applications inside this folder. Make sure to include all of the application's files—in the case of iMovie, put the entire iMovie folder in the Other Applications• folder. This works well for Microsoft Office 98, too—if you put the Office 98 folder in the Other Applications• folder, even the Clip Art Gallery should work.

Q I have a computer at my law office that we use as a file server. It does not have AppleShare or any official file-server software installed; we just use the Mac OS's built-in Personal File Sharing. This simple setup works fine for us. The problem is that our old computer is showing its age and is getting increasingly slow and unstable.

We are about to upgrade to a new iMac and we want to make it our new file server. Our current server has lots of users already set up, as well as some pretty complex privileges. Is there a way to transfer our configuration to our new iMac?

A Personal File Sharing is way up on my list of things that make the Mac great. This cool capability—introduced with System 7—allows every single Mac to act as a file server. As wonderful as it is, it does have some limitations, such as a maximum of ten concurrent users. If this limitation is acceptable, then an iMac provides an effective, inexpensive file-sharing solution.

To transfer all the users groups and privileges from a previous computer, follow these simple steps. Start by transferring a copy of the Users And Groups Data File from the Preferences folder on your old server to the same folder on the new machine. This should quickly transfer all your users and groups. Next, transfer all your data to the new computer, carefully organizing files *exactly* as you had them on the old server.

To get the permissions right, you need to make the invisible AppleShare PDS file on your old server visible (an invisible AppleShare PDS file sits at the root level of every shared volume and maintains file permissions). Once you make this file visible, you can copy it to the new computer and make it invisible again, thus duplicating your privileges from the old machine.

A little-known AppleShare utility called AppleShare IP First Aid (http://asu.info.apple.com) is our favorite option for making the file visible. AppleShare IP First Aid is a free utility designed for use with AppleShare IP servers to verify and fix server information (fortunately, it also works well with Personal File Sharing). We haven't tested it with anything earlier than Mac OS 8, but it works perfectly in that system.

You can make a PDS file visible or invisible, verify and fix corrupted Users And Groups files, and even back up and restore PDS information. Once you've copied everything, use AppleShare IP First Aid to verify the transferred information and make sure you have the server set up correctly.

Q I just bought a new game for my computer and noticed that the CD window has a picture in it next to the icons. I've never seen this before and wonder how it is created. I have a CD burner and often burn my MP3 collection onto CDs for archiving. I would love to jazz them up with a graphic. Please tell me how to create a window with a picture in it.

A The first time I saw a Finder window with a picture in it, I literally flipped. How on earth is this trick done? The image is actually nothing more than a bunch of nameless icons stacked right next to each other to form a picture, but how do you create such an array? For many years, you would have used a free utility called Iconizer (http://hyperarchive.lcs.mit.edu), but this utility has not been updated since 1997 and crashes most current Macs. Fortunately, a newer, more complete application for creating Finder window pictures, Leister Productions' IconaRanger (www.leisterpro.com), lets you create a window image from any PICT file.

Want to get really fancy? Use IconaRanger to create windows like this for your next CD.

Buz Zoller is a technology support specialist for a school district in Texas.

Networking Macs and PCs

Q At my house my Dad has a PC, which he uses mostly for games, and I have an iMac. How can I network these computers so my dad and I can play network games together?

A Setting up a cross-platform network can be extremely simple or dauntingly complex, depending upon what you want it to do. Here are three common scenarios.

1. You just want to play head-to-head games. All you need is a crossover cable. Just plug one end of the cable into each machine, assign each one distinct IP numbers in the form 192.168.0.x (where *x* is a number between 1 and 255), and you should be good to go!

2. You want both machines on the Internet. You must establish a simple TCP/IP network hooked up to a cable or DSL connection. This requires an access router or a dedicated computer to translate the single IP address your ISP provides into many addresses. If both your PC and your Mac are Ethernet-connected and have separate IP addresses, you just need to know the IP address of the other computer (the Mac keeps this information in the System Profiler under the Apple Menu).

3. You want to share printers or files. More-complex cross-platform networking may require some extra software to let the PC and the Mac speak the same language. Macintosh computers generally speak AppleTalk, while PCs tend to speak via the NetBEUI or IPX protocols.

Before you rush out and buy a translation package, do some research to find out exactly what your networking needs are and how best to fill them. A quick trip to the wonderful MacWindows Web site (www.macwindows.com) will prove indispensable.

Buy 2 Get $10 back by mail when you buy any two games from a hit list of 15 MacSoft titles. Complete details on page 21

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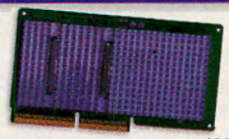

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G4/400MHz	20.0GB Ultra ATA-66	64MB/1.5GB	1.0MB at 200MHz	DVD-ROM	Yes	$100	64MB	#124920	$1594.98
G4/Dual 450MHz	30.0GB Ultra ATA-66	128MB/1.5GB	1.0MB at 225MHz	DVD-ROM	Yes	$200	128MB	#124921	$2494.98
G4/Dual 500MHz	40.0GB Ultra ATA-66	256MB/1.5GB	1.0MB at 250MHz	DVD-ROM	Yes	$200	128MB	#740288	$3194.98
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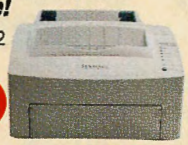

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Indigo DV	400MHz	10.0GB	64MB	CD	2 ports	2 ports	Yes	Yes	—	—	#124913	$994.98	–
Ruby DV	400MHz	10.0GB	64MB	CD	2 ports	2 ports	Yes	Yes	—	—	#124914	$994.98	–
Indigo DV+	450MHz	20.0GB	64MB	DVD	2 ports	2 ports	Yes	Yes	$100	64MB	#124915	$1294.98	$46
Ruby DV+	450MHz	20.0GB	64MB	DVD	2 ports	2 ports	Yes	Yes	$100	64MB	#124916	$1294.98	$46
Sage DV+	450MHz	20.0GB	64MB	DVD	2 ports	2 ports	Yes	Yes	$100	64MB	#124917	$1294.98	$46
Graphite DV SE	500MHz	30.0GB	128MB	DVD	2 ports	2 ports	Yes	Yes	$100	64MB	#124918	$1494.98	$53
Snow DV SE	500MHz	30.0GB	128MB	DVD	2 ports	2 ports	Yes	Yes	$100	64MB	#124919	$1494.98	$53

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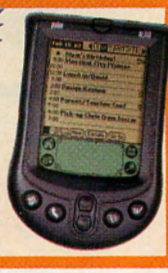

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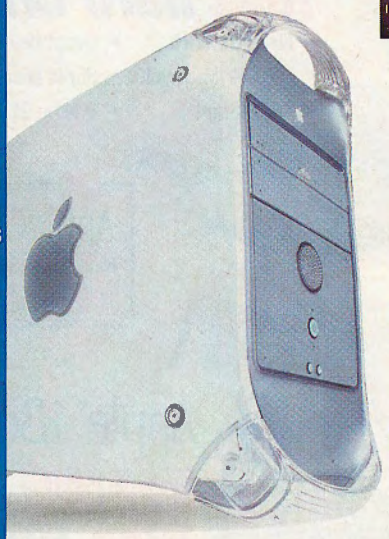

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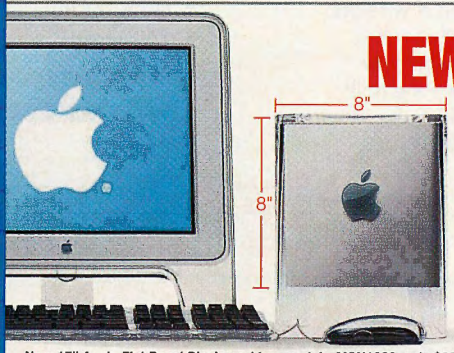

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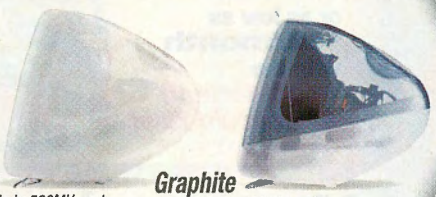

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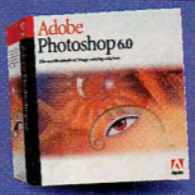

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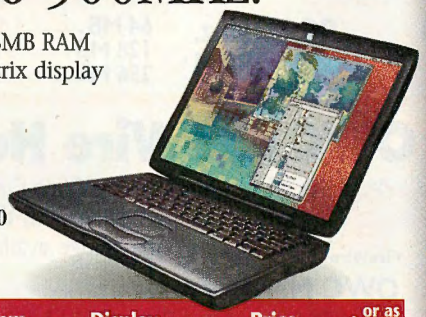

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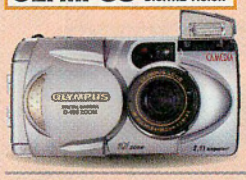

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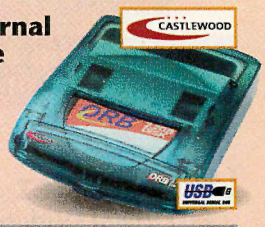

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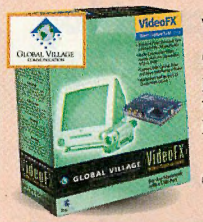

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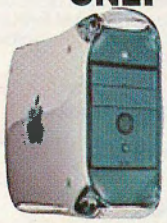

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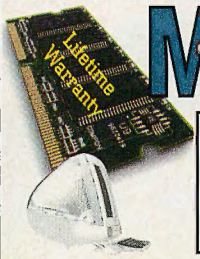

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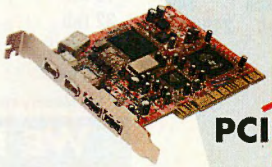

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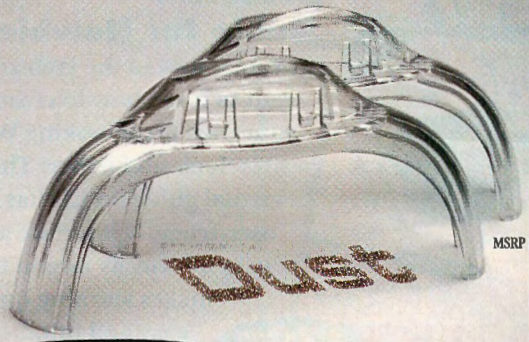

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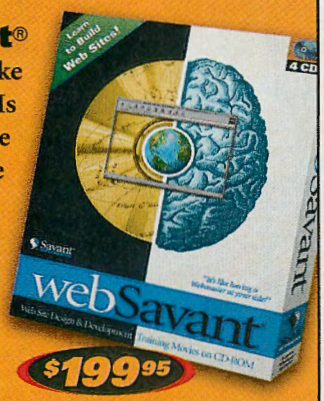

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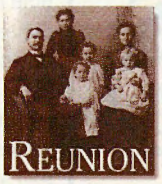
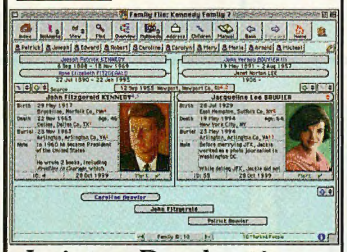


MacAddict RATED

FREAKIN' AWESOME!



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Loop the Loop.

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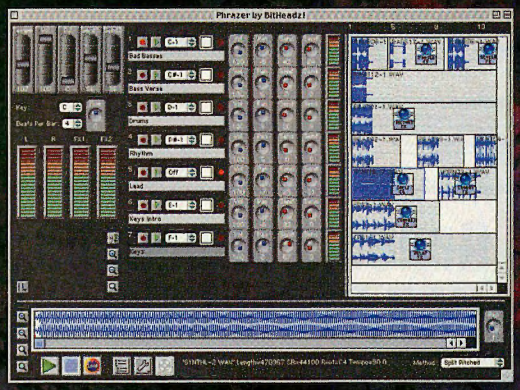
Phrazer is *the* real-time audio loop sequencer Mac users have been waiting for. Powerful pitch and tempo matching algorithms, built-in sample editing, and on-board digital effects provide total control of your sound.



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- Import Acid™ libraries
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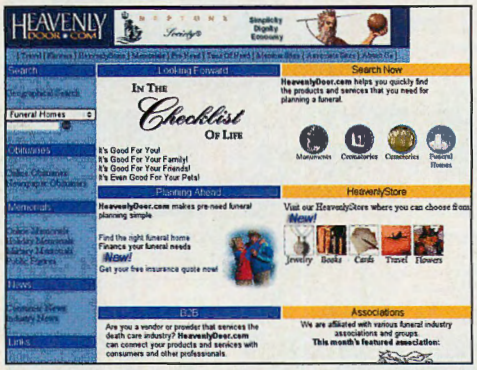
shut down

Happy holidays—now shut up and laugh.

Dot-Com Mania Reaches to Heaven

If you thought just about *every* conceivable industry had hit the stock market in some IPO crush, we think you're right—now that HeavenlyDoor.com has gone public. This Internet-based company lets you make funeral arrangements while you still have an Internet connection. And if you happen to run a funeral-related business, HeavenlyDoor.com can help you with business-to-business services, including Web page design. As if that weren't enough, HeavenlyDoor.com recently appeared on *.com with Mark Hamill*, a cable-based television series. If you want to look up HeavenlyDoor.com's stock, its symbol is HDVC on the NASDAQ.



Dying to get information on the funeral industry? HeavenlyDoor.com can help.

News Stories We Thought We Read Somewhere...

Adobe Announces InGoShopIstrator

Cupertino—In an attempt to corner every software market at once, Adobe announced its next-generation überproduct: InGoShopIstrator. The new software will do page layout, build Web pages, edit digital images, and create vector-based art in a single software package. The software will also act as an operating system.

The company hopes the Adobe-style interface will encourage people to use the new software. Failing that, Adobe will offer prizes to the first 10,000 people to buy the new software, including a new taupe Pontiac Aztec and a real, live human being to drive it.

System requirements for InGoShopIstrator have not been set but are rumored to be four G4-based Macs linked in parallel over a gigabit Ethernet network, 1.5GB of RAM, 10GB of hard drive space, and a 4X CD-ROM drive. Pricing has not been determined.

Top 5 Genetic Projects Apple Will Undertake

With the addition of Arthur D. Levinson, CEO of Genentech, to Apple's board of directors, look for these innovations in the coming years.

- Genetically altered superengineers who don't need sleep or food
- Drought-resistant keyboards
- Fused iMac colors such as Tomacco (tomato plus tobacco)
- Optical mice that breed more quickly
- Steve Jobs clones

MacAddict Corrections

While building an open-source icon editor for Mac OS X, Ian Sammis opened a hole in the space-time continuum, inadvertently freeing Richard Simmons from his extradimensional prison. Ian and David Letterman are very sorry.

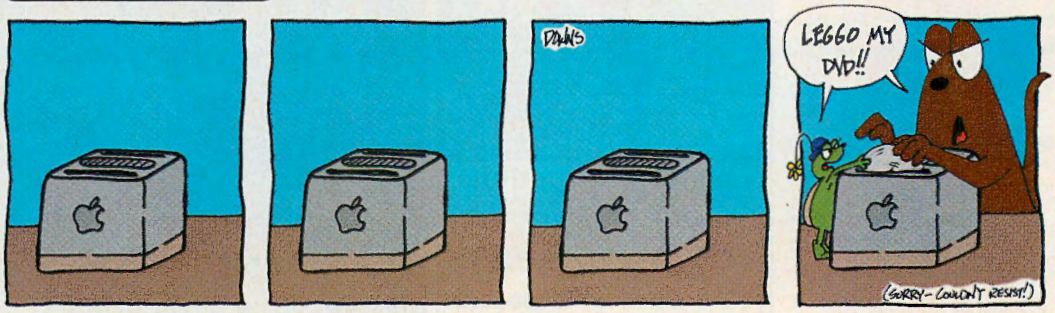
On page 194 of our October issue, we reported that the meek had inherited the earth and we were all out of a job. What we meant to say was that Mia Fairchild had inherited her mother's brown hair. We're very sorry, but the meek are even sorrier. Stupid meek.

In our "Predictions" article on page 227 of our May issue, we predicted that iTools would still be around. Although we were correct, we're still sorry.

Old Joke, New Punchline

In heaven, the core OS is Linux, the user interface is Mac OS, and the marketing is Microsoft. In hell, the core OS is Mac OS, the user interface is Windows, and the marketing is Linux.

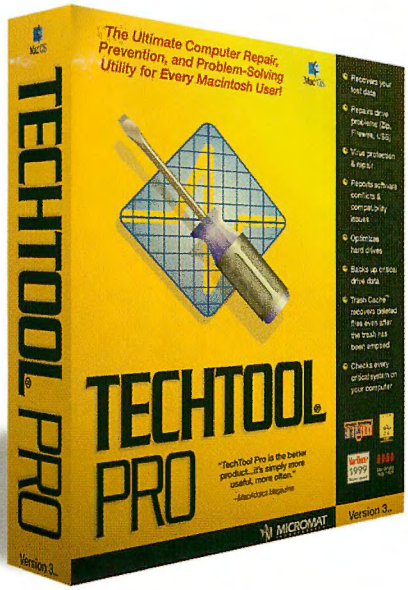
FITZPATRICK THE RAT™



Visit the Fitzpatrick archive at www.insanely-great.com/comic/index.html.

BY CHUCK DOWNS

One Box. Fix All.



Micromat's disk repair and Macintosh troubleshooting utility just became a whole lot better. Besides repairing drives, recovering data and checking the health of your Macintosh components, TechTool Pro 3 can now help protect you against virus problems and software conflicts. Version 3 also sports a new modern interface. But the real power of TechTool Pro 3 isn't in the features you can see, it's in the features you can't see. Like a multitude of new drive repair routines that can save data that other utilities would simply abandon. An improved recovery system that will find lost files in the darkest caverns of a damaged drive. You'll also find improved performance on key features like disk optimization. Simply put, TechTool Pro 3 is the most complete and powerful troubleshooting utility available for your computer. Why settle for anything less?

MacWorld Aug. 1999

MacAddict RATED SPIFFY

MacHome 1999 Product Award

mac today EDITORS' CHOICE '98

TECHTOOL PRO 3

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